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Analysis of the role of the shipping agent in the logistics chain and operations of crude oil tankers, during their port call to the oil terminal of Balao, Ecuador: case of study : EP FLOPEC

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ANALYSIS OF THE ROLE OF THE SHIPPING AGENT IN THE LOGISTICS CHAIN AND OPERATIONS OF CRUDE OIL TANKERS, DURING THEIR PORT CALL TO THE OIL TERMINAL OF BALAO, ECUADOR.

CASE OF STUDY: EP FLOPEC

By

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DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

(Signature): Juan Sebastian Vasquez Alvarez

(Date): 24 - 09 - 2019

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Supervisor’s affiliation: SML

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ABSTRACT

Title of Dissertation: **Analysis of the Role of the Shipping Agent in the Logistics Chain and Operations of Crude Oil Tankers, During their Port Call to the Oil Terminal of Balao, Ecuador. Case of Study: EP FLOPEC**

Degree: Master of Science (MSc)

Ecuador is an oil producing country whose economy depends most on crude oil exports. Hence, many Major oil companies employ ships to buy Ecuador's crude oil to take it to refineries around the world. Although the crude oil of the country is open to any interested cargo charterer, there is only one company allowed by law to transport the crude oil produced in Ecuador. That is the case of EP FLOPEC, a public shipping management company with the responsibility and obligation to operate the ships carrying national crude oil. Furthermore, EP FLOPEC has its shipping agency, which is benefited by the legal attributions of EP FLOPEC. Moreover, the crude oil of Ecuador is exported by sea from the Oil Terminal of Balao, which is comprised of three sub-terminals with offshore buoys.

This research aims to explain and describe the role of the shipping agent in the logistics chain and operations of oil tankers calling to Balao. Similarly, to highlight the importance of the efficient performance of the shipping agent of EP FLOPEC, which handles 99.6% of the market share in Balao.

Furthermore, this study explains the concepts and legal principles of the shipping agent in regards to the relationship with principals, his influence in the negotiation of charter parties, and the limitation of his liabilities. All these concepts were investigated through an extensive literature review, and are applied to the operations of the shipping agency of EP FLOPEC, to establish a manual of procedure based on local regulations and

international practices. Alternatively, quantitative data from the records of the Oil Terminal of Balao are analyzed to discover the impact that a negligent service of the shipping agency could have on EP FLOPEC as a whole Company and to the economy of the country. Finally, this research discusses the findings obtained from the data analysis to answer the research questions, followed by the conclusion based on the fulfillment of each objective presented in the research.

KEYWORDS: Shipping Agent, Logistics, Tankers Operations, Crude Oil, Balao Oil Terminal, EP FLOPEC, Charter Party, Manual of Procedures, Case Study, Market Share, Market Structure.

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LIST OF ABBREVIATIONS

DWT: Deadweight

SBM: Single Buoy Mooring

MBM: Multi-Buoy Mooring

ETA: Estimated Time of Arrival

ETC: Estimated Time of Completion

ETS: Estimated Time of Sailing

SOF: Statement of Facts

GDP: Gross Domestic Product

NOR: Notice of Readiness

BL: Bill of Lading

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CHAPTER 1

1. INTRODUCTION

Shipping is an international industry that connects ports and traders through the employment of ships. As a secondary market, maritime transportation derives from the demand for goods and involves different parties and actors within its logistics network. Furthermore, seaborne trade is classified into two types of maritime transport services: tramp and liner. (Lun, Lai & Cheng, 2010).

Tramp shipping is a complex and dynamic market where ships carry cargoes from any port, at any time and date, to wherever the cargo is required at market's freight rates, similar to a "taxi service." Consequently, traders rely on the flexibility provided by the tramp service fixing cargoes and employing ships by the market needs, either for a single voyage or for a period of time. Furthermore, tramp shipping divides into two categories related to the type of cargo, such as dry bulk or liquid bulk (Lun, Lai & Cheng, 2010). On the other hand, the liner shipping is similar to a "bus service," with preannounced ports or routes, and fixed prices (Stopford, 2009). This study focuses on tramp shipping within the category of liquid bulk, specifically, on crude oil seaborne trade and operations.

The commercialization of crude oil started with small volumes packed and transported in wooden crates known as "case oil," within for short distances; as, refineries used to be constructed near to drilling areas (Jones, P. E., 1998). It was in 1886 when the first tanker

carrier was built with a capacity of 2,300 tonnes. However, since 1970, governments have decided to take advantage of the profitable business of exporting crude oil and have decided to build refineries near to consumption areas. Consequently, the construction and employment of bigger crude oil tankers became essential to transport crude oil around the world. (Institute of Chartered Shipbrokers, 2016)

Being that crude oil is the biggest single commodity carried in the maritime industry due to its importance as the principal source of energy. Accordingly, oil tankers have contributed to the evolution of maritime transportation since its beginning. The cCrude oil is transported as it comes from the ground to be refined, resulting in derivatives products as of gasoline and diesel. (Institute of Chartered Shipbrokers, 2016). Consequently, crude oil represents around 60% of the goods transported by liquid bulk carriers. (Shuo, 2018).

In 2017, the crude oil tanker market experienced a slight increase of 2.7% year to year, due to the significant rise in imports from developing economies from in East Asia and China. Thus, the tanker industry has benefited from the geographical dispersion of consuming and producing countries located mostly in the Atlantic. (UNCTAD, 2018)

Further, the strong position of crude oil as a single commodity transported by sea has been reflected in the market share of the global fleet along with history, which in 1980 represented about 49.7 percent of the total dead-weight tonnage worldwide. In 2017, oil tankers still held a considerable market share of 29.2 percent as represented in Figure 1. (UNCTAD, 2018)

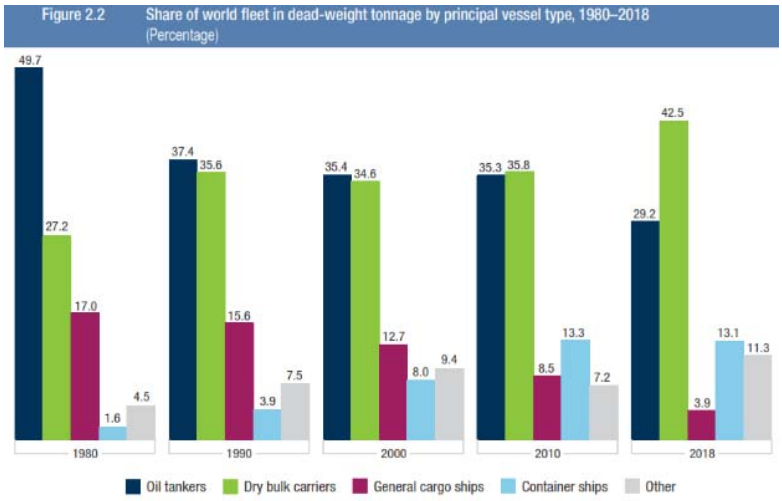


Figure 1 Share of World Fleet 1980 - 2018

Source: UNCTAD, 2018

The present study is structured into six chapters and begins with a discussion of the background of the research scenario followed by the identification of the problem , along with the objectives and questions to be answered through the application of a case study methodology, in Chapter One. Then, the literature review of secondary sources takes place in the second chapter, where the main concepts of shipping agencies, crude oil tanker logistics and operations, charter parties, among others, are analyzed, to reach the objectives of the research. They are followed by Chapter Three, where the data and methodology of the case study are presented, mixing qualitative and quantitative evidence from official sources that will guide the research presented in Chapter Four. Moreover, the findings are discussed in chapter five. The discussion is made in accordance with the research questions to satisfy the objectives of the study. Finally, the conclusion, limitations, and recommendations are stated in Chapter Six to conclude the research.

1.1. Background

Ecuador, located on the west coast of South America, is a producing and exporting country of crude oil and derivatives. The economy, and the GDP, of the country heavily relies on oil exports and imports, as they have an important contribution to the national Trade Balance, which is divided into two sectors: Oil Trade Balance, and Non-Oil Trade Balance (World Bank, 2018).

The annual report from Central Bank of Ecuador in regards to the exports of oil products between January and September 2018, showed an increase of 37.5 percent year to year compared to 2017 in terms of value, representing an income of USD 6,755.5 million to the national economy. The main destinations of these exports were the United States of America with the highest share (49%), followed by Peru (17%), and Chile (14.5%), among others countries in different various continents. (Central Bank of Ecuador, 2018).

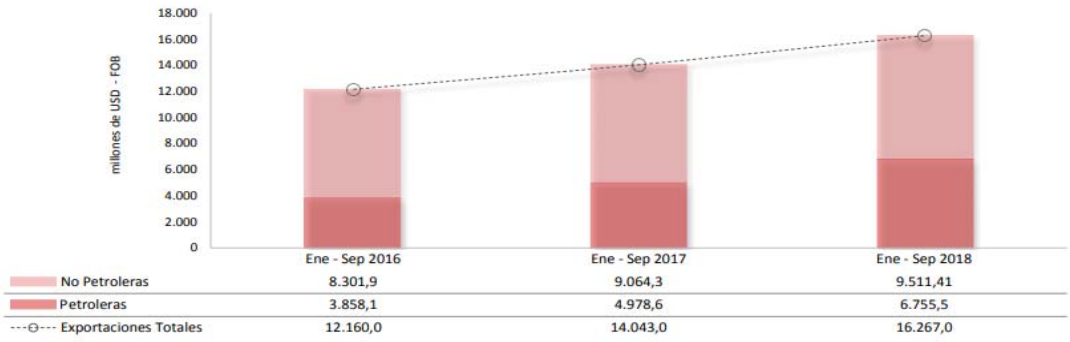


Figure 2 Non-Oil and Oil exports in millions of dollars – FOB

Source: Central Bank of Ecuador, SENAE, SHE, EP Petroecuador. (Central Bank of Ecuador, 2018)

Crudo	TM	FOB		Derivados	TM	FOB	
	13,599,075.5	6,012,493.5	*Part.*		1,857,091.5	743,053.3	*Part.*
EE UU	6,722,581.3	2,944,362.8	*49.0%*	PANAMÁ	1,465,180.9	570,294.4	*76.8%*
PERÚ	2,212,565.9	1,022,083.8	*17.0%*	EL SALVADOR	86,127.8	37,998.4	*5.1%*
CHILE	1,998,323.6	873,583.8	*14.5%*	EE UU	96,137.5	36,778.4	*4.9%*
PANAMÁ	822,264.9	377,560.9	*6.3%*	HONDURAS	84,633.9	35,964.9	*4.8%*
CHINA	830,605.3	361,516.6	*6.0%*	MÉXICO	59,773.0	25,703.4	*3.5%*
INDIA	549,239.0	234,174.4	*3.9%*	GUATEMALA	27,743.8	11,826.7	*1.6%*
JAPÓN	286,689.2	123,352.5	*2.1%*	COLOMBIA	18,802.8	11,807.7	*1.6%*
BAHAMAS	89,445.3	36,802.0	*0.6%*	PERÚ	7,302.9	6,278.8	*0.8%*
JAMAICA	45,402.9	20,618.3	*0.3%*	CHILE	3,746.5	1,717.3	*0.2%*
ESTONIA	41,958.0	18,438.5		AGUAS INTERN.	371.6	1,143.7	*0.2%*
				Otras	7,270.7	3,539.4	*0.5%*

Figure 3 Destinations of Crude Oil exports (left) and Oil Derivatives (right), in terms of volume (TM) and value (FOB)

Source: (Central Bank of Ecuador, 2018)**.**

On the other hand, Ecuador imports some oil derivatives and lubricants such as diesel, nafta, propane, and cutter stock, among others. According to statistics from Ecuador's Central Bank (Central Bank of Ecuador, 2018) , the imports of these products reached an amount of USD 3,153.6 million, resulting in a profit of USD 3,602 million to the Total Oil Trade Balance.

COMBUSTIBLES, LUBRICANTES Y PRODUCTOS CONEXOS	TM	FOB	
	4,728,192.64	3,134,725.60	
Combustibles			
	4,636,674.40	3,002,645.64	*Part.*
EE UU	2,457,543.71	1,538,288.21	*51.2%*
PANAMÁ	1,492,915.98	1,021,355.87	*34.0%*
HOLANDA	309,297.84	208,798.65	*7.0%*
COREA DEL SUR	59,066.92	43,985.13	*1.5%*
COLOMBIA	81,201.92	42,270.34	*1.4%*
ARGENTINA	55,499.63	28,745.15	*1.0%*
CHINA	40,026.87	26,047.99	*0.9%*
FRANCIA	34,854.12	23,083.08	*0.8%*
RUSIA	28,718.20	22,554.90	*0.8%*
ESPAÑA	31,085.03	21,768.51	*0.7%*
Otras	46,464.17	25,747.79	*0.9%*

DIVERSOS	TM	FOB	
	4,427.13	49,722.25	
Diversos			
	4,427.13	49,722.25	*Part.*
EE UU	1,289.54	14,272.70	*28.7%*
CHINA	449.18	12,793.64	*25.7%*
JAPÓN	412.00	4,715.74	*9.5%*
ARGENTINA	221.97	2,224.15	*4.5%*
INDONESIA	186.41	1,623.53	*3.3%*
ALEMANIA	135.19	1,580.36	*3.2%*
BÉLGICA	126.12	1,541.54	*3.1%*
COLOMBIA	434.57	1,462.38	*2.9%*
ESPAÑA	185.96	1,035.33	*2.1%*
COREA DEL SUR	104.03	1,009.50	*2.0%*
Otras	882.17	7,463.38	*15.0%*

Figure 4 Imports of Oil Derivatives and lubricant imports (left) and other diverse products (right), in terms of volume (TM) and value (FOB)

Source: (Central Bank of Ecuador, 2018).

Furthermore, Ecuador exports Napo crude oil, Oriente crude oil, and Fuel oil. These types of crude oil and oil products are exported from the Oil Terminal of Balao, located in the city of Esmeraldas at the north coast of the country on the Pacific Coast. The terminal has three offshore sub-terminals, where vessels perform loading and unloading operations: OCP, SOTE, and TME. The crude oil in Ecuador is commercialized by the Public Petroleum Company - EP PETROECUADOR, to private companies globally.

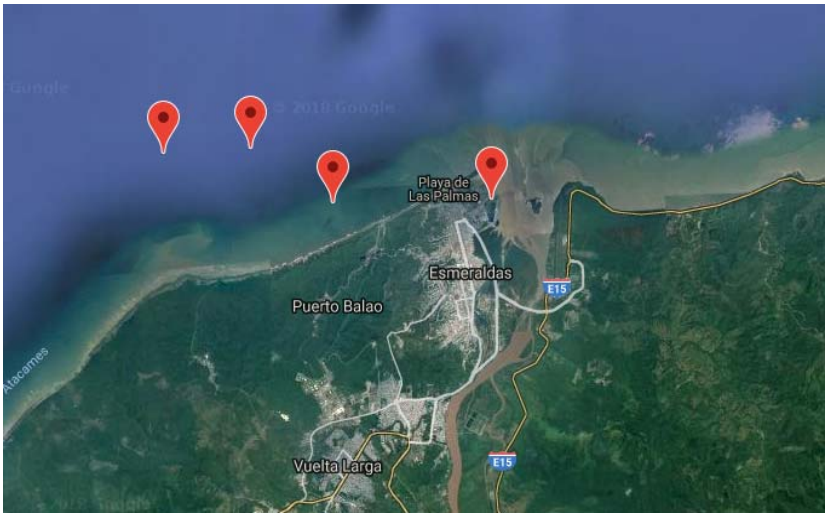


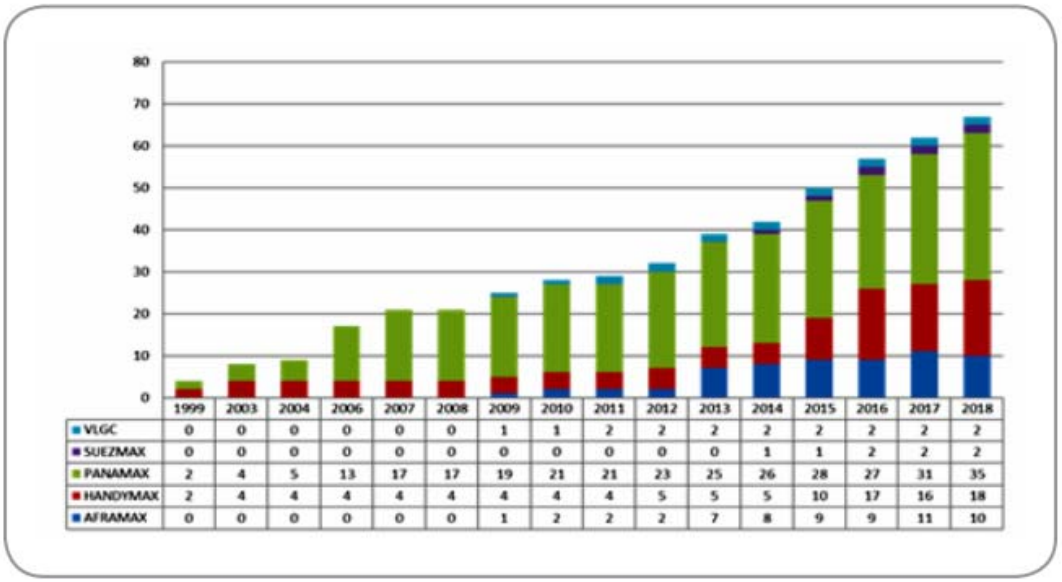
Figure 5 Balao Terminal, Esmeraldas-Ecuador.

Source: Balao Oil Terminal (Superintendence of Balao Oil Terminal, n.d.)

During 2017, Ecuador exported through TME, SOTE and OCP terminals around 116,332,617 barrels of crude oil and 13,805.094 barrels of fuel oil #6, according to the annual report of the Public Petroleum Company. (EP PETROECUADOR, 2017)

The tanker carriers that transport the crude oil from Ecuador are under the operational control and management of EP FLOPEC, the biggest Shipping Management and ship-owning company in Ecuador. EP FLOPEC is a public company, which core business and responsibility is the maritime transportation of Ecuador's crude oil and its derivatives domestically and internationally. As a ship-owner and ship-management company, EP FLOPEC operates a fleet comprised of 67 vessels, of which five ships are owned by the company, and 62 ships are associated with the Panamax Pool and a variety of commercial partnerships.

Among the extensive fleet under the operation and control of the Company, they have oil tankers from different sizes, such as Handymax, Panamax, Aframax, Suezmax, VLGC (gas tanker) and other smaller ships (EP FLOPEC, 2019).



	1999	2003	2004	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
VLGC	0	0	0	0	0	0	1	1	2	2	2	2	2	2	2	2
SUEZMAX	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	2
PANAMAX	2	4	5	13	17	17	19	21	21	23	25	26	28	27	31	35
HANDYMAX	2	4	4	4	4	4	4	4	4	5	5	5	10	17	16	18
AFRAMAX	0	0	0	0	0	0	1	2	2	2	7	8	9	9	11	10

Figure 6 EP FLOPEC Management Fleet

SOURCE: EP FLOPEC 2019

Moreover, along with the organizational structure of the Company, EP FLOPEC has its own Shipping Agency focused on attending and representing the Company's fleet and some external vessels that call to the Oil Terminal of Balao, Esmeraldas (EP FLOPEC, 2018).

As EP FLOPEC is the Ship-owner and Operator of vessels that carry the crude oil of Ecuador, the shipping agency has the benefit and competitive advantage of attending the ships operated by the company. Although cargo charterers are not legally forced to appoint Flopec's shipping agency, the Chartering Department of EP FLOPEC encourages cargo owners to nominate the Company's Agency during the negotiation of Charter Parties and Contracts of Affreightment.

1.2. Problem Statement

According to the Law 147, Facilitation of Export Cargo and Maritime Transportation, article 15, the seaborne trade of crude oil and derivates is reserved for national shipping companies, public, or mixed, where the share of the State must be at least the 51 percent of the capital (ALADI, 2006). EP FLOPEC, acting as a Ship-owner and under the regulation of Ecuador, is the only entity responsible for transporting the crude oil from Esmeraldas, or any maritime terminal in Ecuador. Therefore, the Shipping Agency of EP FLOPEC has the opportunity to carry with almost the entire market share of vessels calling to Balao Terminal.

The shipping agent plays an important role in the logistics chain of the oil tankers, especially when most of the ships arrive under charter party terms and are subject to

demurrage clauses and specifically in Voyage Charter Parties, where the carrier agrees to transport the cargo of a charterer from one port to another for an agreed tariff. In this contract, the carrier covers all the expenses related to the ship, Master, and the crew (Clarkson Research Studies, 2004).

The shipping agent should act effectively and efficiently to receive and dispatch the oil tankers in the least time possible as 'time is money' for the parties involved and, in the case of EP FLOPEC, for Ecuador's government and national economy. However, it has been noticed that the service provided by the shipping agent is not always as expected. Owners and charterers complain when ships stay in an anchorage area waiting for too long to be dispatched by the boarding agent and authorities, after cargo completion. In such cases, the market actors ask for reasons and causes of the delays to dispute the demurrage costs between them and determine liabilities. Most of the delays can be linked with the workload of the shipping agency attending to almost the entire market in Balao, Esmeraldas. Therefore, the agency needs to have a correct and efficient operational manual of procedures, including contingency plans for unforeseen circumstances or emergencies. Similarly, to determine the role and liabilities of the shipping agent during the port call of crude oil carriers to Balao.

1.3. Aims And Objectives

This research aims to appraise the role of the shipping agent from the port call of oil tankers at Balao Oil Terminal, and to identify the effects of a negligent service from the agency to the actors of crude oil transportation, **as outlined in the following:**

- To analyze the role of the Shipping Agent in the logistics chain of Oil Tankers that arrive in Balao Oil Terminal.

- To determine the relationship between Charterers, Agency, and Ship-owners.

- To establish an efficient guideline of procedures and contingency plan for the Shipping Agent.
- To determine the effects of a negligent service of the Shipping Agent in oil tankers logistics chain.
- To calculate the market share of the Shipping Agency of EP FLOPEC in the Balao Oil Terminal.

1.4. Research Questions

The following questions have been established to meet with the objectives:

- Can an Oil Tanker arrive and perform loading operations without a Shipping Agent?
- What are the responsibilities and functions of the Shipping Agent?
- Is it mandatory or convenient for a Shipping Agent to have a guideline of procedures?
- What are the implications for the ship-owner and charterer if berthing operations are delayed under a Voyage Charter Party?
- What is the market share of EP Flopec's Shipping Agency in the Balao Oil Terminal, and how is it structured?

1.5. Methodology

This research was conducted through two types of methodologies, listed as follows:

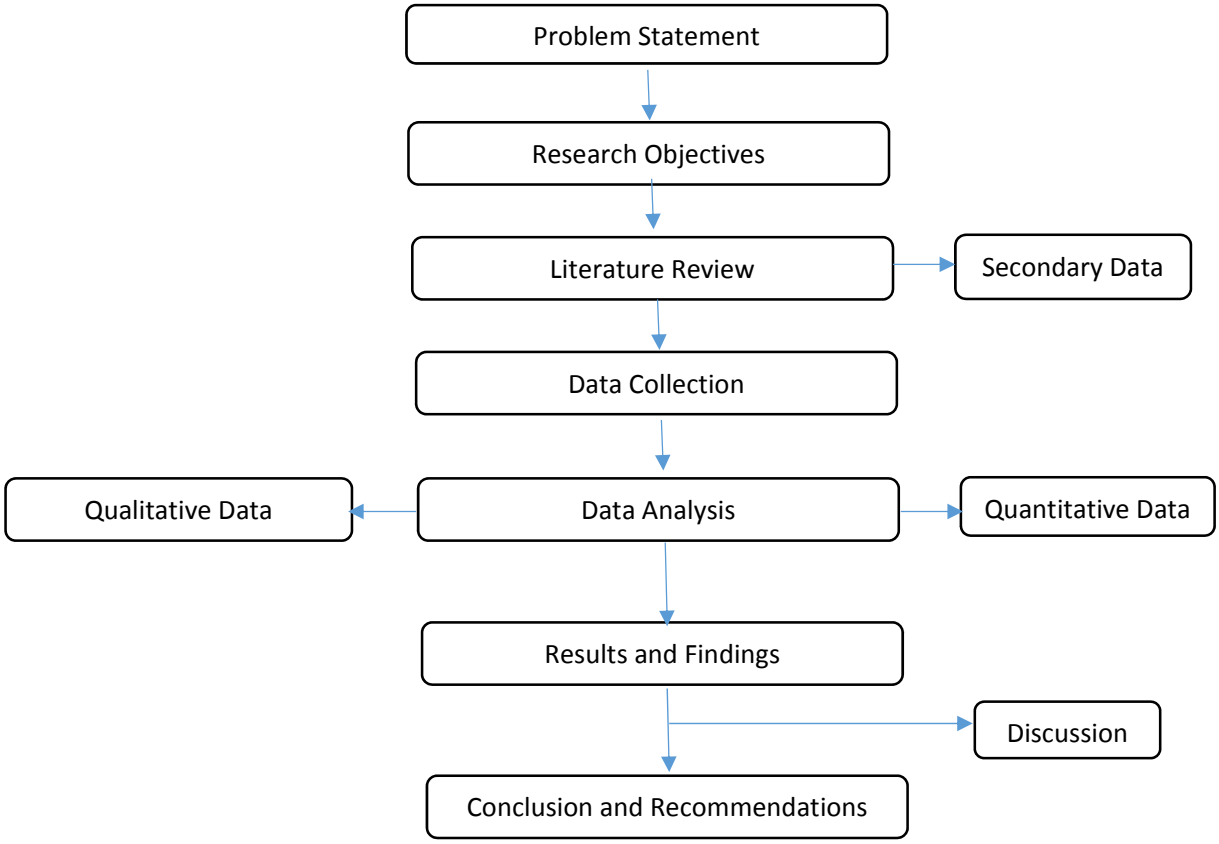
- **Source Analysis:**

The information for this study was obtained from books, journals, reports, institution´s websites, and available academic data on the internet, and, at the same time, from previous dissertations of the World Maritime University. The information was collected regarding the main topics or concepts of Shipping Management, Oil Tanker Operations, Charter Party, and the operations of Flopec's Shipping Agency.

- **Case Study**

A case of study is a qualitative method with an approach to research from different types of data and sources, including quantitative data. It allows the researcher to have not one but many points of view about the study. This methodology applies the formulation of research questions to ensure that the topic is fully explored by the aims and objectives (Baxter, P., & Jack, S. 2008).

Research Diagram



CHAPTER 2

2. LITERATURE REVIEW

This chapter aims to explain the operation, procedures, and actors involved in the logistics chain of crude oil tankers through the application of a substantial literature review. Starting from the application of principles of maritime logistics and the role of transportation in logistics, this section provides insights to understand the functions of the shipping agency and how the tramp industry is integrated.

2.1. Maritime Logistics

The application of logistics principles in maritime transportation caught the attention of scholars and market practitioners, which resulted in the emerging of a new discipline called maritime logistics. This new concept adopted by maritime companies and ports has improved the quality of services and operations in the industry (Panayides, Song, 2013). Moreover, maritime logistics involves the optimization of resources in the logistics chain to transport cargoes by sea, rivers, or waterways at lower costs and with efficient information flow (Gudehus and Kotzab, 2012) However, this new discipline is more applicable in the liner sector, where shipping lines, ports, and maritime actors along the logistics chain, have integrated their operations and cooperate with each other to create maritime networks and more efficient transportation systems (Panayides, 2006).

On the other hand, there are not many studies or research regarding the application of maritime logistics to the dry bulk and tanker market. It can be related to the fact that

the tramp market is highly volatile, characterized by having cycles and impossible to predict. Consequently, shippers and receivers make trade according to the production capacity, to avoid either storage of goods in their premises or small shipments hurting their cash flow (Comtois and Lacoste, 2012)

2.2. Transportation in Logistics

The globalization and deregulation of markets has allowed traders to expand and optimize their production processes and services by importing lower-cost materials from developing economies and exporting final products to all over the world (Levitt, T. , 1993). These new opportunities resulting from the globalization were have been possible through the application of logistics principles. According to (Panayides & Song, 2013) logistics plans, the aim is to execute and control the correct and smooth flow of cargoes from the place of origin to the point of delivery or consumption, to satisfy the requirements of the clients. However On this basis, these opportunities for traders to expand and cross borders were have also been supported by transportation systems, such as maritime transportation. Furthermore, the seaborne trade provides with big great advantages to the logistics chain, being a safe alternative to transport products of all kind of sizes, weights or volume. In other words, transportation and logistics are interrelated, to bringing competitiveness to traders and governments (Tseng, Yue, & Taylor, 2005).

2.3. Crude Oil Tankers Operations and Logistics

Crude oil is a raw material extracted from the ground and offshore areas, with the characteristic of being heavy and composed by highly volatile gases. Therefore, to make it clearer and lighter, the crude oil goes through a refining process resulting in derivative products, mainly used for the generation of energy. The natural properties of crude oil as

a source of energy justify the high demand of oil, which is transported by sea from producing countries to refineries to produce gasoline and other derivatives (Henning, 2012).

The crude oil and refined products are transported by sea by specially designed tankers. According to Safety of Life at Sea convention (SOLAS), a tanker is a ship designed and properly equipped to carry liquid inflammable cargoes. However, this research focuses only on tankers that transport crude oil.

Crude oil carries have above 10,000 DWT, and accordingly (Kavussanos, Visvikis, 2016) are classified as per their capacity as illustrated in Figure 7.:

Table 1 Classification of Crude Carriers - DWT

CRUDE OIL CARRIERS	
Classification	**DWT**
Ultra Large Crude Carrier (ULCC	>320,000
Very Large Crude Carrier (VLCC)	200,000 - 300,000
Suezmax	115,000 - 200,000
Aframax	70,000 - 115,000
Panamax	50,000 - 70,000
Handysize	10,000 - 50,000

Source: The international handbook of shipping finance. Kavussanos & Visvikis, 2016.

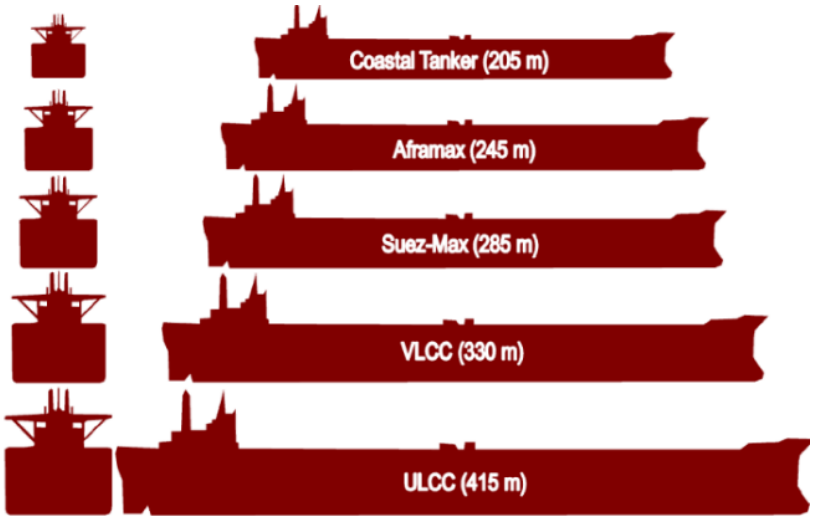


Figure 7 Crude Oil Carries Size -Length

Source: The geography of transport systems. Routledge. Rodrigue, J., 2016.

The deadweight reflects the loading capacity of the tanker. In other words, an Aframax with a deadweight of 70,000 tons can carry 70,000 tons of crude oil.

Furthermore, tankers have a simple design, which consists of a steel box with a flat bottom and parallel sides divided into different compartments where the crude oil is stored. These compartments are separated by bulkheads, for safety reasons, as stability, and to avoid leaks if holes occur. The tanks are connected to manifolds located on the main deck through a piping system with valves, where hoses from shore are placed to commence pumping crude oil. Similarly, the crude oil from the ship is pumped out through the same piping arrangement during discharge operations (Valois, 1997).

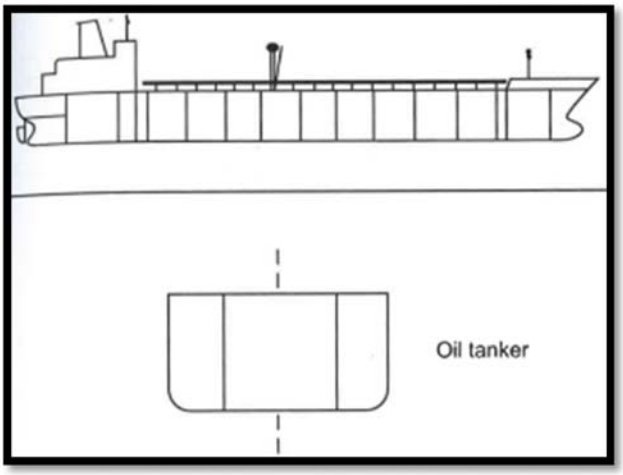


Figure 8 8 Crude Oil Tanker Design

Source: Tankers: An Introduction to the Transport of Oil by Sea, 1997

The first step in the operation of crude oil carriers is the transfer of information between the Terminal and the ship. For that reason, ship operators appoint a shipping agency previous to any port call to get information about the Terminal and to represent the ship .

Among the most important facts informed by the Terminal through a shipping agent, are the depth of water at berthing point, the need to request a pilot for mooring maneuvers, sizes and details of hoses, the loading rate of the Terminal, mooring ropes and accessories requested for the maneuver, and the number of tugs assisting berthing operation (Håvold, J. I., 2010).

Tanker ships must perform different loading procedures from port to port, some port facilities allow ships to berth next to a pier and, in other cases, ships have to perform a

single buoy mooring SBM or multi-buoy mooring MBM (Board, M, 1991), which requires specific equipment and devices chain stoppers.

The procedure to berth at an offshore buoy requires all the attention and measures to prevent human accidents or damages to the ship and buoys. Therefore, terminals with buoy mooring provide to the vessel with experienced pilots and loading masters, who attend to loading and discharging operations from the beginning. In the case of MBM, it is essential to have adequate communication between the bridge and poop to avoid collisions with boats assisting the mooring operation. Moreover, Terminals must request to the ship to have mooring ropes in good condition and to check them before any maneuver. Once the ship is positioned, the ropes are moored to buoys securing the position of the ship during the loading or discharging operation.

On the other hand, berthing at SBM requires not only the attention and assistance of trained personnel but the utilization of high standard fitting materials from the ship and the buoy. Similar to the mooring maneuver at MBM, the bridge has to be in constant communication with the bow and be advised in advance about the type of buoy to berth and weight to be lifted. Additionally, regular inspections have to be done while the ship is berthed to check the condition of the mooring lines. (International Chamber of Shipping, & Oil Companies International Marine Forum, 1978).

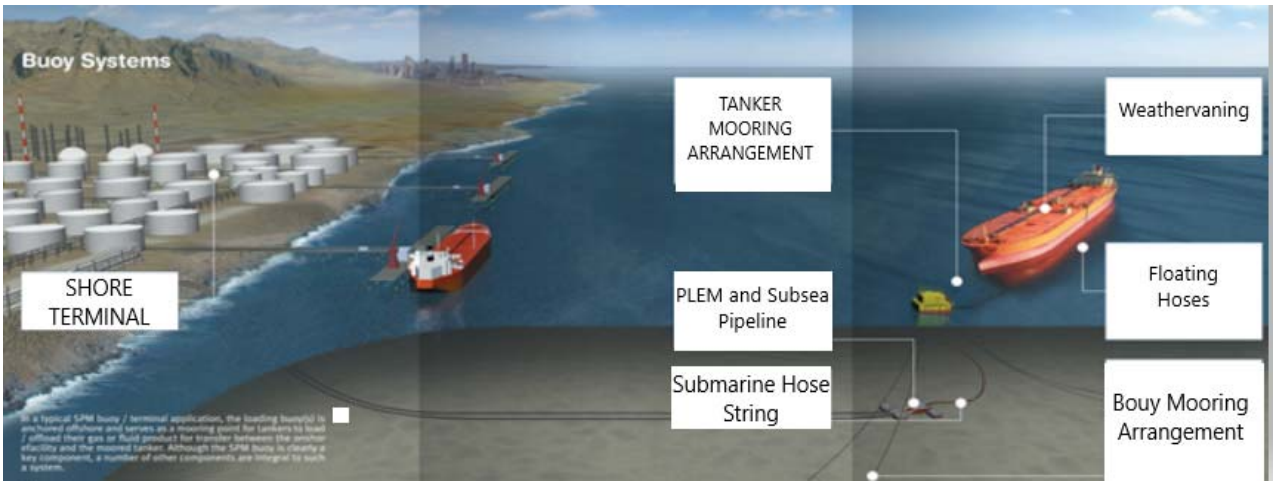


Figure 9 Off-Shore Oil Terminals - Buoy Sytems

Source: Bluewater Energy Services, 2013

In other words, Masters have the obligation to contact port authorities or shipping agencies previous to arrival to ask for instructions for anchoring and berthing prospects. Even though the Master knows how to control his ship, the captain would require the assistance from a pilot to berth in allowed areas, especially when ships berth at offshore buoys. Alternatively, the master needs pre-arrival information from agents or operators to comply with all requirements and restrictions of the port and buoys (Board, M, 1991).

Crude Oil tankers are subject to rules and regulations based on International Conventions to have common standards in such a competitive market. The International Conventions are set by the International Maritime Organization (IMO) to regulate safety at seas and to coordinate technological developments for the protection of seas. Among these conventions, in the tanker market, the most relevant are the Convention on the Safety of Life at Sea (SOLAS) and Convention for the Prevention of the Pollution of the sea (MARPOL), which was initially drafted to deal with oil pollution from tankers (Mankabady S, 1986).

2.4. The Role of the Shipping Agent in Tanker Operations

The Shipping Agent is the person who represents to the ship-owner or operator and the cargo charterer against the National Authorities, and is responsible for arranging all the port matters and husbandry services required by the Master of the Ship. Moreover, the Shipping Agent must coordinate berthing prospects with the terminals and provide with the cargo documents to the Charterers and all parties involved. Additionally, there are some other important functions of the shipping agent (FONASBA, 2018):

- To provide required pre-arrival documents and information to the Master of the ship, in advance.
- To report to port authorities about the arrival of the ship, including best ETA.
- To attend reception and dispatch of the ship.
- To arrange a pilot's assistance and tugboats.
- To provide the Customs Officer with documents about previous routes, cargo manifest, and stores of the ship.
- To provide the necessary information regarding the crew, and passengers, if there is any, to the Immigration officer.
- Ensure that all documents and certificates of the ships are in good order, and coordinate with Port Authorities the time of granting the free pratique to the vessel.
- To arrange crew changes, provision deliveries, garbage disposals, bunkers, or any requested service by the Master or parties involved.
- To provide to the Master and all parties with the Cargo documents for approval and coordinate the port clearance with Authorities.

The activities mentioned above are some of the most important responsibilities or services of the Shipping Agent, in general. However, the role of the Shipping Agent is not well-known along the logistics chain of crude oil tankers. The actors mainly known are the ship-owner, charterer, shipbroker, pilots, port authorities, and insurance

representative, among others. This study highlights the importance of the role of the Shipping Agent, who is an indispensable piece of the logistics chain upon whom principals rely.

A smooth loading or discharging procedure of an oil tanker depends on the efficiency and infrastructure of the Oil Terminal (Merk, O., & Dang, T. T., 2012), in combination with the coordination and arrangements made by the shipping agency. The Shipping Agent has to be in constant communication with all the parties involved commercially and operationally, as agents are usually contacted by cargo charterers to get information about the cargo status, and by ship-owners or operators to receive voyage instructions and terms to comply with during vessel's port call. On the other hand, agents must coordinate activities with the terminal's radio station, national and local maritime authorities, pilots, surveyors, ship-chandlers, pollution officers, and customs and health authorities, among some of the different operational actors.

2.4.1. Relationship between the Shipping Agent and Principals

The operations of crude oil tankers in a port could involve a ship-owner, possibly a time charterer or disponent owner, and a cargo owner. All of these actors will have different interests and approaches to the Shipping Agent. However, the Agent should only serve and protect the interests of the party that appointed him. According to the Institute of Chartered Shipbrokers among the types of appointments, we can find (Institute of Chartered Shipbrokers, 2012):

- **Owner's Appointment:** Made by the ship-owner who usually operates the ship on a voyage charter basis. In this form of appointment, the duties of the Agent

would be to take care of all husbandry matters and crew requirements, to arrange berthing operations, and to cover port costs of the ship from arrival to dispatch.

- **Appointed by Voyage Charterer:** Commonly known as “Charterer’s Agent,” this form of appointment could be confusing as it is made and paid by the owner. The difference lies in the choice of the Agent by the charterer, who instructs the owner to appoint his preferred agent. This practice is common among major oil companies, to ensure the assistance of qualified and experienced agents to handle their cargoes. Moreover, charterers pick the Agent for confidentiality reasons and trust. However, the Agent will protect the owner’s interests and provide him with all the required information and details of the operation, even before communicating with the charterer.

- **Time Charterer Appointment:** The time charterer has the obligation to cover all port expenses including the appointment of the Shipping Agent, as per agreement of the charter party. Therefore, the time charterer will pay and appoint to the Agent. Hence, the Shipping Agent will have to serve the interests of the time charterer and support him even if disputes with the owners arise.

- **Owner Protective Agent:** This form of appointment happens when the owner has not to trust in the Shipping Agent appointed by the time charterer or disponent owner, especially, when the owner feels the need to protect his interests due to previous bad experiences with either a certain agent or port.

2.5. The Shipping Agent and the Law

Under the Law of Agency, the Shipping Agent can be defined as someone who involves the principal (ship-owner, or disponent owner) with a third party into a contractual

agreement. In other words, the Agent has no liabilities on the contract that he takes on behalf of his principals. The Agent cannot be sued on those contracts, and neither can they sue the third party in case of breach of contract. However, the Agent can only sue its principal for non-payment of agency fees or disbursement accounts of the agency. Alternatively, the Agent can negotiate the terms of appointment with its principal and establish the right to hold goods or money, and even sell the principal's properties to cover overdue payments (Institute of Chartered Shipbrokers, 2012).

For this reason, the Shipping Agent needs to have an effective relationship with contracting third parties, to inform them accordingly about the identity of his principals, and to declare that he is acting "as an agent only." On the other hand, the Agent will only bind the principal to a contractual agreement with a third party if the principal has given previous consent and actual authority to make a contract on his behalf, or the authorization to represent him. Similarly, if the principal ratifies any action made by the Agent. (Institute of Chartered Shipbrokers, 2012)

In some cases, due to time zone differences or unforeseen situations, the Agent has to make decisions on behalf of his principal. When that is the case, the actions are known as "Agent of Necessity," and the principal would analyze the basis on the decision was made. Moreover, the Agent has the nature of fiduciary, which means a relationship of trust with the principal. Nevertheless, if the principal proves that he was affected by an action made by the Agent for the benefit of another ship, then the principal would not support those actions, and a potential incident will could arise.

2.5.1. Duties and Obligations of the Shipping Agent

The obligations of a Shipping Agent are similar to other agency relationships (Institute of Chartered Shipbrokers, 2012):

- Not to make contracts or agreements on behalf of its principal without full disclosure of the negotiation.
- To separate and differentiate the principal's funds and goods entrusted to the agency from the assets and funds of the agency.
- Not to make a secret profit from agreements made on behalf of its principal. In some jurisdictions, such an act could be considered a criminal offense.
- To follow the instructions made on the appointment.
- To keep the principal's activities and negotiations with complete confidentiality and not share information with any other party.

In the case of crude oil tankers and tramp shipping, in general, the appointment to the agency is usually made for a single voyage or several agreed voyages. In this form of nominations, the terms and conditions of the appointment are agreed via telex or brief e-mail messages.

2.6. The Shipping Agency and the Charter Party

In the tramp industry, the parties agree on certain terms and conditions over the cargo fixtures and enshrine them in the charter party contract. These contracts are usually made with the assistance of a shipbroker, who in exchange of a commission would fix a cargo and provide with professional advice to the parties to protect their interests. Several tankers are owned by operators and chartered out to major oil companies, some of them for single voyages, short term periods, and in some cases during the lifetime of the ship (Bes J, 1964). Therefore, the tonnage of the tanker market is covered by tankers owned by oil companies on bareboat charter party for long periods, time charters for specific periods in a worldwide range, voyage charters for an agreed number of voyages, and voyage charters for a single voyage.

The Shipping Agent does not influence the terms agreed on by the charter party. However, it can advise or provide with useful information to the parties about the calling port that could have some impact on the terms of negotiation. Nonetheless, the charter party agreement will have a huge impact on the duties of the agent and requirements made by principals to protect their interests.

Furthermore, the charter party is a type of maritime contract where the charterer obtains from the ship-owner, full or partial control of the ship during a specific period of time, voyages or voyages (Trowbridge, 1974). This term comes from Latin “Carta partita,” as in ancient times traders used to divide or split the agreement into two parts, for each party (Scrutton . E., McNair, W. L., & Mocatta, 1955). Nowadays, there are three types of charter party contracts in the maritime industry listed as follows in points 2.6.1 through 2.6.4.

2.6.1. Demise Charter Party

Also known as a bareboat charter party, it consists of the complete possession and control of the vessel for a period time, from the ship-owner to the charterer. The charterer would appoint the Master and crew and would employ the ship to carry any cargo and for any voyage or voyages (Scrutton . E., McNair, W. L., & Mocatta, 1955). In the demise charter party, the charterer is treated as the owner of the ship for many, but not all, purposes. In other words, the demise charter party is not a contract for carriage of specific cargo, it is a contract to hire the vessel without the service element (Todd, 2015)

2.6.2. Time Charter Party

Different from the demise charter party, in this type of contract the charterer pays to hire to employ the vessel for a period of time, where the possession of the ships remains by the owner, who appoints the crew and is responsible for paying them. At the same time, it has the obligation to cover the expenses of running the vessel. On the other hand, the charterer is responsible for arranging and paying for bunkers, tugs, pilots, and other port costs on every voyage (Scrutton . E., McNair, W. L., & Mocatta, 1955). The charterer has the right to employ the ship as he wishes but with some restrictions regarding the cargo and trading areas, in some cases to sub-let the vessel to a sub-charterer.

In regards to the appointment of the Shipping Agent, it is the obligation of the time charterer. However, the charterer can sub-charter the vessel and transfer the right to appoint the Agent to the sub-charterer. It can be repeated in an extensive chain of sub-charterers, where the last sub-charterer would have the right to appoint the agency. Moreover, it could be the case where the owner includes a clause in the charter party to indicate that the agent has to assist the owners with husbandry matters under the charterer's account. Although it can be agreed by the parties, it would not cover expenses

considered out of normal. Therefore, the owner would be responsible for these extra expenses or could appoint a different agent (Latarche, 1998).

Furthermore, the Agent plays an important role when the tanker goes off-hire for repairs, arrests, or any issue the ship could have. It concerns the Agent as he has the responsibility to report the exact date, time, and quantity of bunkers on board. Moreover, it such circumstances may results be more convenient to the charterer as if an efficient and quick action from the Agent could save money to the charterer by not paying the hire and charging to the owner for bunkers on board since the very first moment of the off-hire (Latarche, 1998).

2.6.2.1. Hire

The time charterer has the obligation to pay a monthly amount for the hire of the vessel, since from the exact time the ship is delivered to the time charterer, until the expiry date when the ship is redelivered back to the ship-owner (O'Brien, F. J. , 1974). Usually, the terms and conditions of the hire are stated in the charter party and include the compensation to the charterers for the remaining bunkers on board. The value of the bunkers can be discounted from hire as per agreement of the parties.

2.6.2.2. Off Hire

As the time charter pays for the hire of the vessel, the ship-owner has the obligation to provide the counterparty with a seaworthy ship and regular maintenance to avoid the deviation of the ship for repairs or breakdowns of machinery. If that is the case, the charter

party states that the time lost hast to be deducted from the hire, and the ship will be off-hire during that period. (Coghlin, T., 2014).

2.6.3. Voyage Charter Party

It is the most common contract to carry bulk cargoes by sea from one specific point to an agreed port of destination. In this type of charter party, the owner retains the possession of the ships and is responsible for the navigational and operational control of the ship. Hence, ship-owner cover all the expenses of the vessel, like bunkers, pilots, tugs, and port costs, and among others (Scrutton . E., McNair, W. L., & Mocatta, 1955). The charterer pays a fixed freight rate for the transportation of the cargo, which can be paid as a lump sum, or in some cases depends on the quantity or volume of cargo carried (Todd, 2015).

In this type of charter party, the time that the voyage takes does not influence on the freight rate. If the voyage takes longer than estimated, the ship-owner cannot ask for compensation on the agreed freight. Similarly, the ship-owner loses time to employ the ship with a different fixture. Therefore, from the ship-owner's point of view, optimizing the delivery of the cargo would imply huge savings and profit (Todd, 2015). The shipping agent has to be ready to assist the vessel efficiently during the port call by arranging all services and providing information to the ship-owner in advance to avoid delays. However, the parties agree on an allowed to time to load and discharge, known as laytime, which in case of being exceeded would result in a compensation rate for the ship-owner.

Even if the Agent may not see the actual charter party agreement, sometimes they receive some of the main points of the fixture as a recap from brokers. In the recap, the broker uses abbreviations that could be difficult to understand. However, an efficient

Shipping Agent should have copies of the charter party forms to understand the rights of his employer (Latarche, 1998).

In the Voyage Charter Party of tankers, the parties agree on costs according to the Worldscale table, which is an annual table published by a panel of American and London brokers. The shipping agent has to check the port costs for tankers, as the owner or disponent owner will only pay costs included in the Wordlscale table (Valois, 1997).

2.6.4. Contract of Affreightment

In some negotiations, the parties agree to transport either a specific volume of cargo that could involve several voyages and various ships until the all the cargo is shipped, or by carrying as much cargo as possible in a period of time. For this type of negotiations, charterers and owners agree on special terms in a Contract of Affreightment. This contract can contain terms from a single charter party type or terms from different forms (Scrutton, T. E. , 1904).

2.7. The Agent, the Laytime, and its Consequences

2.7.1. Laytime

The period of time the parties agree for the ship to load and discharge is known as laytime. It means that owners or carriers compromise to have the vessel ready to load at an agreed port or berth, and the charterers make the cargo available to be loaded. This period of time which in the Tanker Industry is usually within 72 hours of the agreement, is agreed on by the charter party and the cost for the laytime operations is additional to

the freight (Wood, P. J., 2000). Therefore, if the loading or discharge exceeds the time agreed in by the charter party, the charterer is in the obligation to pay compensation to the owner for keeping the vessel retained for a longer period. This compensation is known as “demurrage” and is paid daily on an amount agreed by the parties. Alternatively, the charterer could complete loading or discharge before the canceling day of layime, and in that case, it is the owner who has to pay a reward to the charterer for releasing the ship faster. This reward paid to the charterer is known as “dispatch,” and is usually half of the amount agreed for demurrage (Institute of Chartered Shipbrokers, 2016). However, dispatch is not usually considered in Tanker’s charter parties.

The main point of debate in the calculation of laytime is to define when it starts running and when then ‘the clock stops counting.’ According to the Institute of Chartered Shipbrokers, the laytime counts unless the delay is caused by the shipowner, or by certain terms stated on the charter party (Institute of Chartered Shipbrokers, 2016).

The terms or exceptions that could stop the counting the laytime are agreed upon by depending on the type of cargo. Weather conditions, port holidays, and working schedules are some of the exceptions to be considered. However, in the case of oil tankers, there are not too many exceptions due to the nature of terminals and loading operations. One of the most common causes to stop counting the laytime for oil tankers is the shift from the anchorage area to the buoy or berth (Donald, 2013). Similarly, when a ship navigates to a different berth inside the terminal to load another type of crude oil.

2.7.2. Demurrage

The breach of the terms agreed on by the charter party regarding the laytime, results in liquidated damages paid to the owner in the form of demurrage. In contrast, from the

exceptions considered in the calculation of the laytime, once a ship is on demurrage, it is always on demurrage. This common phrase used in the shipping industry means that demurrage starts counting when the charterer exceeds the laytime, and it does not end. Nevertheless, if any delay is caused by the default of the shipowner, it could be taken into consideration as an exception (Institute of Chartered Shipbrokers, 2016).

2.8. The Shipping Agent and the Documents

2.8.1. Notice of Readiness

The Notice of Readiness (NOR) is a document signed by the Master of the ship to let the charterers, or whoever is stated in the charter party, know that the vessel has arrived at the agreed point and is ready to load or discharge. Although the Master has tendered the NOR, it has to comply with these two conditions to be accepted and considered to be 'arrived' (Schofield, J., 2015). In some contracts, known as berth charter parties, the parties agree on a specific berth, quay, or spot of a terminal. Consequently, the ship-owner bears the risk that upon arrival of the ship to the terminal, the specific berth or spot could be congested and, therefore, the ship has to wait without commencement of the laytime. On the other hand, some contracts, called port charter parties, state that is an arrived ship has 'arrived' once it has reached to the loading area of the terminal, even if it has to wait for berthing (Institute of Chartered Shipbrokers, 2016). Once the NOR is tendered and accepted, the laytime starts counting, and the charterer has to load the cargo within that period of time to avoid demurrages.

2.8.2. Statement of Facts

The function of this document is to record all the times of the activities and eventualities that happen during the port call. The statements of facts are used for the calculation of demurrage as it states the arrival time, working periods, and interruptions experienced during the loading or discharging of the cargo. Every movement of the ship is recorded in this document, given that it is better to report all the facts than omit information that could affect the interruption of the laytime (Latarche, 1998).

2.8.3. Bill of Lading

The Bill of Lading (B/L) has an important role in shipping among the cargo documents. It has three main functions (Latarche, 1998):

- **Receipt for goods:** In the tramp industry the B/L has not necessarily be issued by the shipping agent, but can be issued by the shipper or cargo charterer. Moreover, it has to be signed by the Captain of the ship as an admission that the cargo has been loaded on board the ship. The Master signs a set of three originals and any number of copies depending on the requirements of the terminal. Then, the set of originals are returned to the shipper of goods to be distributed, and the Master keeps a set copy of the original for the consignee. However, the Master has to check the information stated on Bill of Lading and compare with the cargo loading to protect the interests of the carrier.

  Moreover, in case the Master notices any damage or particular bad condition of the cargo loaded, he should make the corresponding remarks before signing the B/L. Thus, the B/L will be considered as marked or dirty, causing repercussions

on its second role as a contract in the hands of the consignee. Contrary, if the Bill of Lading has no remarks, it is a clean B/L.

- **Evidence of contract of carriage**: This is a contractual function of the B/L, which is proof of an agreement between the shipper and the owner to carriage goods. It is important to point out that it is not evidence of a contract between the charterer shipper and owner or operator, as these two parties have a contractual agreement under charter party terms. However, when the B/L is transferred from the seller to the consignee or buyer, then the B/L becomes the contract for buyer and carrier. Moreover, the new buyer of the cargo is not affected by the terms and conditions of the charter party between the carrier and shipper, as the valid terms for the buyer are stated in the Bill of Lading only.

- **Document of Title:** The Bill of Lading is the key to the goods. It means that the Master can only deliver the goods to the holder of the original negotiable Bill of Lading. This is very important to bear in mind when it comes to the Tramp Industry and especially to crude oil tankers, as the cargo can be sold many times to different buyers while the ship is navigating. Therefore, when the role of the B/L is for receipt of cargo, it is important to avoid having a dirty Bill of Lading which can jeopardize negotiations of the goods (Howard, T. , 1993)

2.8.4. Cargo Manifest

The Cargo Manifest is a document that reflects the cargo loaded per each Bill of Lading issued. Therefore, the Cargo Manifest will have the information of a certain B/L in the transportation of crude oil. Customs and Port authorities at arrival and dispatch of the ship commonly request this document, even if the vessel arrives in ballast condition.

During the port call of an oil tanker, all the parties push the Agent to obtain information with different interests. Although the Agent is the only representative of the ship and the crew, he should only serve to the principal who hired services and keep all the information confidential to avoid damages in the negotiation between charterers and owners. For these and many reasons, this paper explains the main tasks of the shipping agency, through the analysis of the operations of FLOPEC Shipping Agency, in the Oil Terminal of Balao, Ecuador.

CHAPTER 3

3. DATA AND METHODOLOGY

3.1. Structure of Balao Oil Terminal

Balao Oil terminal has three sub-terminals where ships can berth according to their size in terms of DWT.

- **TME TERMINAL**

The distance between the TME Terminal and the shore is just 2.1 miles, and its minimum depth is 15 meters. This terminal has four mooring buoys in the form of a quadrilateral, where only ships up to 40,000 DWT (Handymax) are allowed to berth and to perform loading or discharging operations of fuel oil, one at the time. (Superintendence of Balao Oil Terminal, n.d.)

- **SOTE TERMINAL**

This Terminal loads Oriente Crude Oil, and it has two different buoys, “Y” and “X.” The “Y” buoy, also known as “Yankee,” is located 3.3 miles from shore, and the “X”, buoy known as “X-Ray,” is one nautical mile from the Y buoy, and 4.5 miles from the shore. Both buoys allow for berthing ships up to 107,000 DWT (Panamax / Aframax), and the minimum depth is 35 meters (Superintendence of Balao Oil Terminal, n.d.).

- **OCP TERMINAL**

The OCP Terminal has two different buoys equipped with two strings of underwater hoses of 24 inches and two strings of floating hoses to load Napo Crude Oil (OCP ECUADOR, 2013). The “C” or Charlie buoy is located at 3.3 miles from shore, and it can handle vessels up to 150,000 DWT in a minimum depth of 29 meters. The second buoy known as Papa “P,” can handle ships up to 350,000 DWT (Aframax / Suezmax / VLCC) at 3.9 miles away from shore (Superintendence of Balao Oil Terminal, n.d.).

However, the Maritime Authority restricts the arrival and berth of ships depending on their sizes in terms of DWT. These restrictions and policies are established in the Operational Manual of the Superintendence of Balao.

3.1.1 Operational Regulations for the Oil Terminal of Balao, Applicable To International Traffic and Cabotage.

Chapter I, Art. 1.

The manual of operations of Balao Oil Terminal aims to ensure the accomplishment of the safety procedures inside the operational areas of the terminal, by ships, operators, cargo owners and public or private entities (Superintendence of Balao Oil Terminal, n.d.).

3.1.2 Definitions of Terms:

- **Terminal Infrastructure:** All the spaces of the oil terminal used for maritime operations.

- **Operations Area:** The area of the terminal reserved for the operations and maneuvers of crude oil tankers only. No other type of ship is allowed to navigate in this area.

- **Anchorage and Maneuver Area:** The space where the ships are destined to drop anchor once they have arrived. In this area only ships or boats involved in tanker operations can navigate.

- **Pilot Zone: The** area of the terminal where crude oil tankers must navigate with a pilot on board.

- **Port Operations:** Any port service or operation provided by the terminal to the ships, cargo owners or customers in general.
- **Pilotage:** Service provided by a pilot from the terminal to the master of the ship, to perform maneuvers and movements insider the operations and anchorage areas.

- **Pilot:** The person who assists the master of the ship as a guide during anchorage and operations maneuvers within the areas of the terminal, for safety procedures.

- **Loading Master:** Representative of the terminal who attend to and control every loading and discharge operation.

3.1.3 Control and Operations for Shipping Agencies

All the operations done in the area of jurisdiction of the Oil Terminal of Balao, are subject to the laws and policies stated in the Manual of Regulations of the Superintendence of Balao.

Every ship calling to the Oil Terminal of Balao has to be represented by a Shipping Agency registered in the Local Maritime Authority. The Shipping Agency will be responsible for the costs and activities of ships during their port calls to Balao. In consequence, all the invoices must be addressed to the shipping agency.

The shipping agencies must renew the operational license every year. The license can be either for international traffic, domestic traffic, or both. Furthermore, the agency has to present the list of agents authorized to board the vessels.

3.1.4 Maritime Operations and Restrictions

The maritime area under the control and jurisdiction of the Superintendence of the Terminal Oil of Balao, is for the exclusive use of loading and discharging activities of crude oil and derivatives of oil. If for any reason, the ship needs to perform another activity, the Master of the ship or the Shipping Agency representing the ship would have to send a formal written request to the Terminal Authorities.

For the reception of the ship at arrival, the pollution officer together with the health authority, customs officer and shipping agent board the vessel to check the validity of certificates required by the Terminal, to operate within its jurisdiction. Following the policies and regulations of the terminal, the certificates and documents requested by the authorities are:

- Last port clearance
- Five copies of General Declaration
- Four copies of cargo manifest
- Four copies of stores declaration
- Two copies of the crew´s effects declaration
- Four copies of the crew list
- Four copies of passengers list
- One copy of the maritime declaration of health
- Two copies of the mail list.

Additionally, when a crude oil tanker arrives for the first time to Balao Oil Terminal, the authorities require some extra certificates. These certificates are mentioned in Table 2.

Table 2 Inward Documents

FIRST TIME ARRIVAL
INTERNATIONAL TONNAGE CERTIFICATE
CARGO SHIP SAFETY CONSTRUCTION CERTIFICATE
CARGO SHIP SAFETY EQUIPMENT CERTIFICATE
INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE (IOPP)
INTERNATIONAL LOAD LINE CERTIFICATE
CARGO SHIP SAFETY RADIO
SAFETY MANAGEMENT CERTIFICATE (SMC)
DOCUMENT OF COMPLIANCE (DOC)
MINIMUM SAFE MANNING CERTIFICATE
CERTIFICATE OF INSURANCE OR OTHER FINANCIAL
INTERNATIONAL SHIP SECURITY CERTIFICATE
CERTIFICATE OF CLASS

Source: Superintendence of Balao Oil Terminal

After checking all the requested documents and certificates, and if all are in perfect order, the authorities give the captain and ship the “free pratique.” Otherwise, the operations of the tanker can be postponed or suspended.

Ships can arrive in ballast condition to Balao. However, the Terminal allows them to have 1,5m of ballast water per every 100 meters of length, in accordance with MARPOL RULE, 13 (2) (b). The Pollution Officer will analyze the condition of the ballast water from

samples taken before authorizing the deballasting procedure. In the Oil Terminal of Balao, the ships performing loading or discharging activities need to have segregated ballast water and must present a report of the last ballast and deballast procedures, including times and geographical coordinates of the last ballasting.

The terminal has three sub-terminals or buoys where the ships berth to load or discharge crude oil or derivative products. According to the regulations of the Terminal, each buoy has a restriction in terms of the size of the ship.

- TEPRE: This terminal allows berthing tankers up to 40,000 DWT.
- Mono-buoys X – Y: In this terminal, crude oil tankers with a DWT up to 100,000 DWT with a maximum tolerance range of +7% can berth.
- Mono-buoy C: Allows berthing crude oil tankers that do not exceed 130,000 DWT with a variance range of +7%.
- Mono-buoy P: This terminal is for the biggest tankers calling to Balao Oil Terminal. In this buoy, crude oil ships up to 250,000 DWT and a maximum variance range of 7% can load.

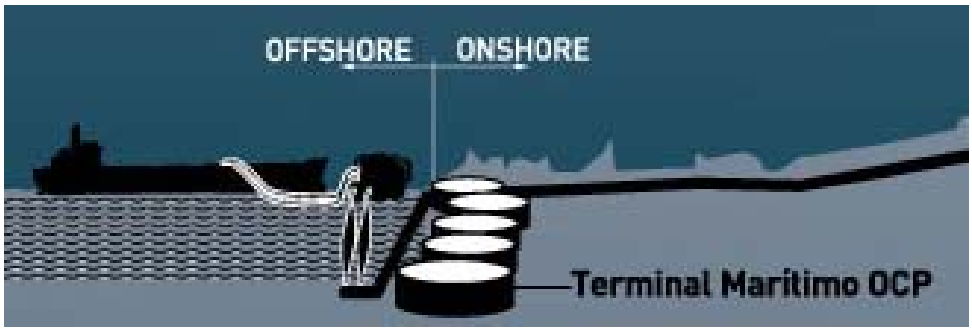


Figure 10 OCP Terminal Buoys

Source: OCP Terminal, Balao 2018

Figure 11 Charlie Buoy - OCP Terminal

Source: OCP Terminal, Balao 2018

All the operations related to loading and discharging of crude oil or other oil products must be supervised and controlled by a Loading Master and personnel from the Superintendence of Balao. At the same time, this regulation applies to bunkering, mooring, and unmooring operations performed in the terminal.

Additionally, the shipping agency has to make a formal written request to the terminal authority before any maneuver. For mooring operations, the request has to be made at least 4 hours in advance and must include the following information:

- Ship's particulars
- Estimated time of berthing operation
- Mooring area
- Name of the Loading Master and Pilot
- Name and details of the tugs and boats assisting the maneuvers.

- Estimated time of loading completion

On the other hand, the request for unmooring maneuvers has to be communicated to the terminal authority up to 2 hours before the operations. Through a written request, the agency has to provide:

- Ship's particulars
- Estimated time for departure
- Next port

On some occasions, under a formal request from the shipping agency and with the authorization from port Authorities, mooring, and unmooring operations can be performed immediately for safety or commercial reasons. The Port Authority of the Oil Terminal will advise via radio the approval and schedule for the maneuvers.

Furthermore, once the ship has been unmoored from any of the buoys of the terminal after completion of cargo loading, the tanker has to navigate to the anchorage area and wait for the shipping agent and authorities to come on board and proceed with the port clearance formalities. Some documents are required prior to approval of port clearance; these are listed as follows:

- Departure request
- One copy of Bill of Lading
- One copy of Cargo Manifest
- Five copies of a general declaration
- Four copies of cargo manifest
- Two copies of the crew list
- Two copies of passengers list
- Four copies of stores declaration
- Traffic permit

- One copy of services performed during the ship's port call, if any.

3.2. EP Flopec Shipping Agency

EP Flopec is a ship-owner and ship management company with the legal responsibility to transport exports by sea. This legal attribution gives the shipping agency of Flopec a significant competitive advantage among other shipping agencies operating in Balao. Consequently, EP Flopec's shipping agency carries almost all the market share in the oil terminal, meaning a huge responsibility and workload for the agents.

For this reason, the shipping agency of EP FLOPEC must have an operations manual that allows the agency to handle almost all of the port calls of crude oil tankers at Balao Oil Terminal.

3.3. EP Flopec Shipping Agency Market Share

The shipping agency of EP Flopec seems to have a competitive advantage against other local shipping agencies at Balao Oil Terminal, as it is part of the company responsible for transporting the crude oil of Ecuador. To determine the market share of EP Flopec's shipping agency, data from the Superintendence of Balao Oil Terminal from 2018 will be analyzed in this section.

The tables below show all the ships that called to Balao Oil Terminal in 2018 for loading operations of crude oil. Moreover, the tables show the name of the shipping agency appointed for each vessel, the quantity loaded, and the owner or disponent owner of each ship.

Table 3 International Traffic - Exports. Jan, 2018

JANUARY - 2018				
#	VESSEL	SHIPPING AGENCY	BLSS	OWNER / DISP. OWNER
1	GULF PEARL	EP FLOPEC	342.881,89	GULF ENERGY MARITIME
2	OVERSEAS PEARLMAR	EP FLOPEC	432.079,69	V SHIPS UK LTD
3	CABO SAN VICENTE	EP FLOPEC	395.394,59	HUMBOLDT SHIPMANAGEMENT
4	SILVER GLORY	EP FLOPEC	1.646.752,37	OTHERS
5	PICHINCHA	EP FLOPEC	684.834,46	FLOPEC EP
6	AQUALEADER	EP FLOPEC	684.843,09	UNISEA SHIPPING
7	CABO DE HORNOS	EP FLOPEC	342.434,23	HUMBOLDT SHIPMANAGEMENT
8	SELECAO	EP FLOPEC	344.458,93	TSAKOS
9	AQUALIBERTY	EP FLOPEC	684.777,32	UNISEA SHIPPING
10	SAIQ	EP FLOPEC	1.059.346,14	OMAN SHIPMANAGEMENT
11	PUNTA GRUESA	EP FLOPEC	344.456,73	OTHERS
12	CABO KAMUI	EP FLOPEC	485.932,12	V SHIPS UK LTD
13	AQUALEGEND	EP FLOPEC	719.764,06	UNISEA SHIPPING
14	SEAWAYS GOLDMAR	EP FLOPEC	451.836,67	V SHIPS UK LTD
15	SEAWAYS VISAYAS	EP FLOPEC	342.775,17	V SHIPS UK LTD
16	ZARUMA	EP FLOPEC	684.470,63	FLOPEC EP
17	SEAWAYS LUZON	EP FLOPEC	342.314,72	V SHIPS UK LTD
18	KERALA	EP FLOPEC	466.373,26	DYNACOM TANKERS
19	SAIQ	EP FLOPEC	850.000,00	OMAN SHIPMANAGEMENT
20	SEAWAYS HELLAS	EP FLOPEC	378.091,19	V SHIPS UK LTD

Table 4 Market Share, Balao. January 2018

Ship-owners / Operators	# Vessels
Dynacom	1
Flopec	2
Gulf Enegy Maritime	1
HUMBOLDT SHIPMANAGEMENT	2
OMAN SHIPMANAGEMENT	2
OTHERS	2
TSAKOS	1
UNISEA SHIPPING	3
V SHIPS UK LTD	6
TOTAL VESSELS	20

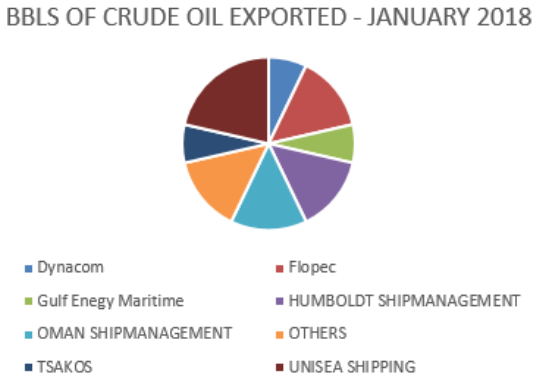


Figure 12 Bbls of Crude Oil Carried per Owner. Jan, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 5 International Traffic - Exports. Feb, 2018

FEBRUARY 2018				
#	VESSEL	SHIPPING AGENCY	BBLS	OWNER / DISP. OWNER
1	AQUATRAVESIA	EP FLOPEC	683.769,08	UNISEA SHIPPING
2	EL JUNIOR PNT	EP FLOPEC	342.366,79	TSAKOS
3	PICHINCHA	EP FLOPEC	684.486,71	EP FLOPEC
4	SOCRATES	EP FLOPEC	342.746,50	TSAKOS
5	RIDGEBURY NICHOLAS A	EP FLOPEC	1.026.663,24	BERNARD SCHULTE SHIPMANAGEMENT
6	PUNTA GRUESA	EP FLOPEC	324.531,95	OTHERS
7	SEAWAYS SILVERMAR	EP FLOPEC	359.539,70	V SHIPS UK LTD
8	SEAWAYS LEYTE	EP FLOPEC	342.612,20	V SHIPS UK LTD
9	KERALA	EP FLOPEC	342.836,97	DYNACOM TANKERS
10	MAYA	EP FLOPEC	342.965,05	TSAKOS
11	SEA HAZEL	EP FLOPEC	684.448,85	SEA WORLD MANAGEMENT
12	SEAWAYS VISAYAS	EP FLOPEC	389.671,37	V SHIPS UK LTD
13	SEAWAYS LUZON	EP FLOPEC	342.847,96	V SHIPS UK LTD
14	SKS SATILLA	EP FLOPEC	791.681,97	STENA SONAGOL SUEZMAX
15	ZARUMA	EP FLOPEC	684.363,14	EP FLOPEC
16	STENA SUPERIOR	EP FLOPEC	1.015.860,75	STENA SONAGOL SUEZMAX
17	WORLD HARMONY	EP FLOPEC	359.626,50	TSAKOS

Table 6 Market Share, Balao. Feb, 2018

Ship-owners / Operators	# Vessels
EP FLOPEC	2
BERNARD SCHULTE SHIPMANAGEMENT	1
DYNACOM TANKERS	1
OTHERS	1
SEA WORLD MANAGEMENT	1
STENA SONAGOL SUEZMAX	2
TSAKOS	4
UNISEA SHIPPING	1
V SHIPS UK LTD	4
TOTAL VESSELS	17

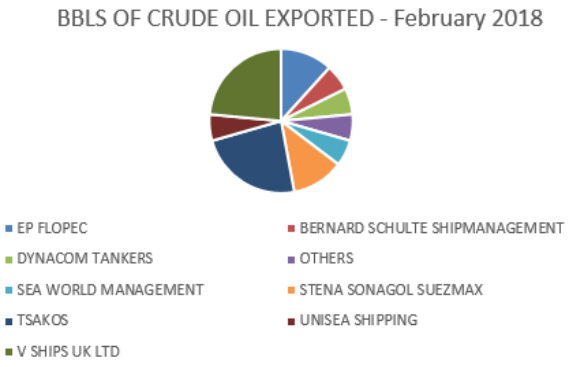


Figure 13 Bbls of Crude Oil Carried per Owner. Feb, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 7 International Traffic - Exports. Mar, 2018

MARCH 2018				
#	VESSEL	SHIPPING AGENCY	BLSS	OWNER / DISP. OWNER
1	MAYA	EP FLOPEC	359.411,07	TSAKOS
2	SILVER GLORY	EP FLOPEC	1.196.335,66	OTHERS
3	SEAWAYS RUBYMAR	EP FLOPEC	342.284,63	V SHIPS UK LTD
4	AZTEC	EP FLOPEC	342.404,42	EP FLOPEC
5	AQUALIBERTY	EP FLOPEC	666.617,71	UNISEA SHIPPING
6	SEAWAYS REYMAR	EP FLOPEC	459.645,05	V SHIPS UK LTD
7	COMMANDER	EP FLOPEC	342.692,60	DYNACOM TANKERS
8	ADVANTAGE SPRING	EP FLOPEC	790.425,90	ADVANTAGE START SHIPPING LLC
9	SEAWAYS LEYTE	EP FLOPEC	359.271,71	V SHIPS UK LTD
10	SELECAO	EP FLOPEC	342.278,11	TSAKOS
11	SEAWAYS PEARLMAR	EP FLOPEC	342.759,82	V SHIPS UK LTD
12	WORLD HARMONY	EP FLOPEC	342.811,31	TSAKOS
13	GENER8 SPARTIATE	EP FLOPEC	1.052.209,87	SELANDIA SHIPMAMAGEMENT
14	SEAWAYS SILVERMAR	EP FLOPEC	359.839,10	V SHIPS UK LTD
15	SEAWAYS JADEMAR	EP FLOPEC	342.894,69	V SHIPS UK LTD
16	KERALA	EP FLOPEC	349.151,80	DYNACOM TANKERS
17	SILVER GLORY	EP FLOPEC	1.208.415,21	OTHERS
18	AQUAPUELCHE	EP FLOPEC	710.524,15	UNISEA SHIPPING
19	SONANGOL PORTO AMBOIM	EP FLOPEC	1.006.850,57	STENA SONAGOL SUEZMAX
20	ZARUMA	EP FLOPEC	684.519,34	EP FLOPEC
21	SEAWAYS LEYTE	EP FLOPEC	342.249,78	V SHIPS UK LTD

Table 8 Market Share, Balao. Mar, 2018

Ship-owners / Operators	# Vessels
ADVANTAGE START SHIPPING LLC	1
DYNACOM TANKERS	2
EP FLOPEC	2
OTHERS	2
SELANDIA SHIPMAMAGEMENT	1
STENA SONAGOL SUEZMAX	1
TSAKOS	3
UNISEA SHIPPING	2
V SHIPS UK LTD	7
TOTAL VESSELS	21

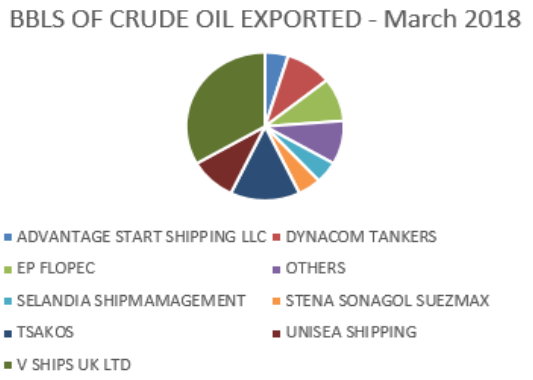


Figure 14 Bbls of Crude Oil Carried per Owner. Mar, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 9 International Traffic - Exports. Apr, 2018

APRIL 2018				
#	VESSEL	SHIPPING AGENCY	BBLS	OWNER / DISP. OWNER
1	SEAWAYS SILVERMAR	EP FLOPEC	359.640,10	V SHIPS UK LTD
2	SEAWAYS PEARLMAR	EP FLOPEC	324.631,01	V SHIPS UK LTD
3	SEAWAYS LUZON	EP FLOPEC	342.702,45	V SHIPS UK LTD
4	AZTEC	EP FLOPEC	359.572,87	EP FLOPEC
5	SEA HAZEL	EP FLOPEC	684.670,67	SEA WORLD MANAGEMENT
6	CAPE BASTIA	EP FLOPEC	791.578,76	V8 POOL INC SUEZMAX POOL
7	DANUBIA	EP FLOPEC	359.335,42	ARHENKIEL SHIPMANAGEMENT
8	AQUAPUELCHE	EP FLOPEC	684.742,82	UNISEA SHIPPING
9	SEAWAYS SILVERMAR	EP FLOPEC	419.758,51	V SHIPS UK LTD
10	SILVER GLORY	EP FLOPEC	965.367,39	OTHERS
11	SEAWAYS LEYTE	EP FLOPEC	359.670,90	V SHIPS UK LTD
12	SEAWAYS VISAYAS	EP FLOPEC	341.645,50	V SHIPS UK LTD
13	SEAWAYS SAMAR	EP FLOPEC	342.267,07	V SHIPS UK LTD
14	AZTEC	EP FLOPEC	342.760,73	EP FLOPEC
15	SEAWAYS REYMAR	EP FLOPEC	359.855,90	V SHIPS UK LTD
16	SAMSARA	EP FLOPEC	994.572,53	TMS TANKERS
17	KERALA	EP FLOPEC	342.651,98	DYNACOM
18	NORDIC ZENITH	EP FLOPEC	873.543,04	NAT CHARTERING
19	ZARUMA	EP FLOPEC	684.816,15	EP FLOPEC

Table 10 Market Share, Balao. Apr, 2018

Ship-owners / Operators	# Vessels
ARHENKIEL SHIPMANAGEMENT	1
EP FLOPEC	3
DYNACOM	1
NAT CHARTERING	1
SEA WORLD MANAGEMENT	1
TMS TANKERS	1
UNISEA SHIPPING	1
V SHIPS UK LTD	8
V8 POOL INC SUEZMAX POOL	1
OTHERS	1
TOTAL VESSELS	19

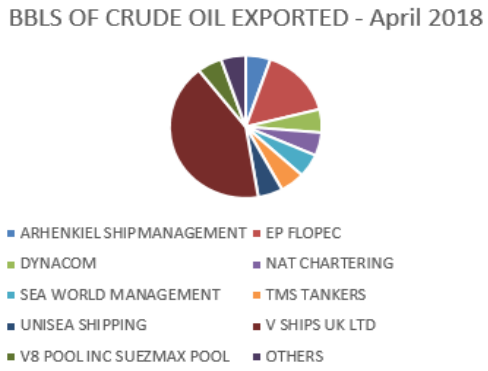


Figure 15 Bbls of Crude Oil Carried per Owner. Apr, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 11 International Traffic - Exports. May, 2018

MAY 2018				
#	VESSEL	SHIPPING AGENCY	BBLS	OWNER / DISP. OWNER
1	AQUASURAZO	EP FLOPEC	684.614,34	UNISEA SHIPPING
2	GULF GLORY	EP FLOPEC	1.717.686,02	COLUMBIA SHIPMANAGEMENT
3	CABO MISAKI	EP FLOPEC	324.570,12	V SHIPS UK LTD
4	DANUBIA	EP FLOPEC	342.642,02	ARHENKIEL SHIPMANAGEMENT
5	CABO DE HORNOS	EP FLOPEC	342.499,61	HUMBOLDT SHIPMANAGEMENT
6	AQUALEGEND	EP FLOPEC	713.631,24	UNISEA SHIPPING
7	SEAWAYS SILVERMAR	EP FLOPEC	323.729,20	V SHIPS UK LTD
8	WORLD HARMONY	EP FLOPEC	342.316,03	TSAKOS
9	AQUALOYALTY	EP FLOPEC	684.539,52	UNISEA SHIPPING
10	GENER8 SPARTIATE	EP FLOPEC	990.481,56	SELANDIA SHIPMAMAGEMENT
11	COMMANDER	EP FLOPEC	466.842,82	DYNACOM TANKERS
12	HOVDEN SPIRIT	EP FLOPEC	665.446,09	ANGLO EASTERN MANAGEMENT
13	AQUATRAVESIA	EP FLOPEC	684.659,31	UNISEA SHIPPING
14	EL JUNIOR PNT	EP FLOPEC	299.853,57	TSAKOS
15	SEAWAYS ROSEMAR	EP FLOPEC	360.045,25	V SHIPS UK LTD
16	SEAWAYS HELLAS	EP FLOPEC	342.751,17	V SHIPS UK LTD
17	AQUAPUELCHE	EP FLOPEC	664.461,56	UNISEA SHIPPING
18	CAPTAIN MICHAEL	EP FLOPEC	956.617,25	EURONAV NV
19	SEAWAYS LEYTE	EP FLOPEC	397.520,37	V SHIPS UK LTD
20	SEAWAYS VISAYAS	EP FLOPEC	359.922,43	V SHIPS UK LTD

Table 12 Market Share, Balao. May, 2018

Ship-owners / Operators	# Vessels
ANGLO EASTERN MANAGEMENT	1
COLUMBIA SHIPMANAGEMENT	1
ARHENKIEL SHIPMANAGEMENT	1
HUMBOLDT SHIPMANAGEMENT	1
DYNACOM TANKERS	1
EURONAV NV	1
SELANDIA SHIPMAMAGEMENT	1
TSAKOS	2
UNISEA SHIPPING	5
V SHIPS UK LTD	6
TOTAL VESSELS	20

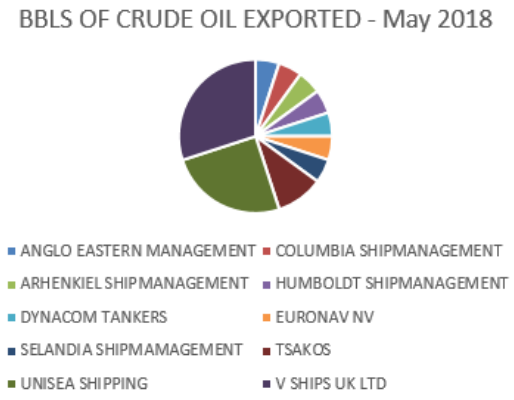


Figure 16 Bbls of Crude Oil Carried per Owner. May, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 13 International Traffic - Exports. Jun, 2018

JUNE 2018				
#	VESSEL	SHIPPING AGENCY	BBLS	OWNER / DISP. OWNER
1	AQUASURAZO	EP FLOPEC	684.943,29	UNISEA SHIPPING
2	ANDES (C)	EP FLOPEC	359.545,82	TSAKOS
3	INCA	EP FLOPEC	324.718,72	TSAKOS
4	PANTARISTE	EP FLOPEC	1.368.832,37	SPRINGFIELD SHIPPING
5	COMMANDER	EP FLOPEC	353.403,26	DYNACOM TANKERS
6	GULF PEARL	EP FLOPEC	342.886,55	GULF ENERGY MARITIME
7	CABO DE HORNOS	EP FLOPEC	359.850,41	HUMBOLDT SHIPMANAGEMENT
8	PICHINCHA	EP FLOPEC	342.882,79	EP FLOPEC
9	PERSEPOLIS	EP FLOPEC	418.148,63	ANDRIAKI SHIPMANAGEMENT
10	SOCRATES	EP FLOPEC	359.447,95	TSAKOS
11	AQUALIBERTY	EP FLOPEC	704.021,88	UNISEA SHIPPING
12	CABO SAN VICENTE	REMAR S.A.	392.496,71	HUMBOLDT SHIPMANAGEMENT
13	SEAWAYS JADEMAR	EP FLOPEC	358.398,15	UNISEA SHIPPING
14	PUNTA GRUESA	EP FLOPEC	342.378,52	OTHERS
15	GULF GLORY	EP FLOPEC	1.255.620,07	COLUMBIA SHIPMANAGEMENT
16	INCA	EP FLOPEC	392.650,77	TSAKOS
17	KERALA	EP FLOPEC	341.444,11	DYNACOM TANKERS
18	PICHINCHA	EP FLOPEC	684.875,79	EP FLOPEC
19	SONANGOL HUILA	EP FLOPEC	778.041,77	STENA SONAGOL SUEZMAX
20	CABO FROWARD	EP FLOPEC	391.683,26	V SHIPS UK LTD
21	AQUALEADER	EP FLOPEC	715.438,84	UNISEA SHIPPING
22	NEAPOLIS	EP FLOPEC	342.607,99	ANDRIAKI SHIPMANAGEMENT

Table 14 Market Share, Balao. Jun, 2018

Ship-owners / Operators	# Vessels
ANDRIAKI SHIPMANAGEMENT	2
COLUMBIA SHIPMANAGEMENT	1
DYNACOM TANKERS	2
EP FLOPEC	2
GULF ENERGY MARITIME	1
HUMBOLDT SHIPMANAGEMENT	2
SPRINGFIELD SHIPPING	1
STENA SONAGOL SUEZMAX	1
TSAKOS	4
UNISEA SHIPPING	4
V SHIPS UK LTD	1
OTHERS	1
TOTAL VESSELS	22

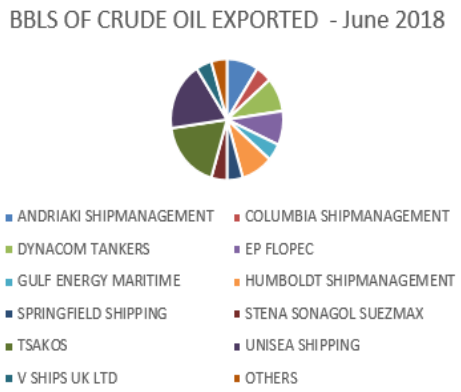


Figure 17 Bbls of Crude Oil Carried per Owner. Jun, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 15 International Traffic - Exports. Jul, 2018

JULY 2018				
#	VESSEL	SHIPPING AGENCY	BLSS	OWNER / DISP. OWNER
1	SEAWAYS SAMAR	EP FLOPEC	357.750,66	V SHIPS UK LTD
2	SOCRATES	EP FLOPEC	342.518,73	TSAKOS
3	OLYMPIC TROPHY	EP FLOPEC	1.026.492,99	SPRINGFIELD SHIPPING
4	PUNTA GRUESA	EP FLOPEC	342.736,25	OTHERS
5	EL JUNIOR PNT	EP FLOPEC	342.807,10	TSAKOS
6	AQUALEGEND	EP FLOPEC	711.387,57	UNISEA SHIPPING
7	AQUAPUELCHE	EP FLOPEC	684.877,94	UNISEA SHIPPING
8	SEAWAYS VISAYAS	EP FLOPEC	324.874,15	V SHIPS UK LTD
9	CABO SAN VICENTE	EP FLOPEC	342.770,23	HUMBOLDT SHIPMANAGEMENT
10	GULF GLORY	EP FLOPEC	990.612,20	COLUMBIA SHIPMANAGEMENT
11	CABO KAMUI	EP FLOPEC	323.780,64	V SHIPS UK LTD
12	SEAWAYS VISAYAS	EP FLOPEC	354.283,69	V SHIPS UK LTD
13	SEAWAYS JADEMAR	EP FLOPEC	468.936,91	V SHIPS UK LTD
14	SKS SKEENA	EP FLOPEC	992.289,37	STENA SONAGOL SUEZMAX
15	ICE FIGHTER	EP FLOPEC	359.713,96	DYNACOM TANKERS
16	AQUALIBERTY	EP FLOPEC	685.305,77	UNISEA SHIPPING
17	ANDES (C)	EP FLOPEC	324.519,16	TSAKOS
18	PERSEPOLIS	EP FLOPEC	342.837,13	ANDRIAKI SHIPMANAGEMENT
19	SEAWAYS SAMAR	EP FLOPEC	399.607,17	V SHIPS UK LTD
20	AQUALOYALTY	EP FLOPEC	673.704,28	UNISEA SHIPPING
21	PICHINCHA	EP FLOPEC	685.138,39	EP FLOPEC
22	ANDES (C)	EP FLOPEC	343.749,92	TSAKOS
23	SEAWAYS HELLAS	EP FLOPEC	342.812,90	V SHIPS UK LTD

Table 16 Market Share, Balao. Jul, 2018

Ship-owners / Operators	# Vessels
ANDRIAKI SHIPMANAGEMENT	1
COLUMBIA SHIPMANAGEMENT	1
DYNACOM TANKERS	1
EP FLOPEC	1
HUMBOLDT SHIPMANAGEMENT	1
SPRINGFIELD SHIPPING	1
STENA SONAGOL SUEZMAX	1
TSAKOS	4
UNISEA SHIPPING	4
V SHIPS UK LTD	7
Others	1
TOTAL VESSELS	23

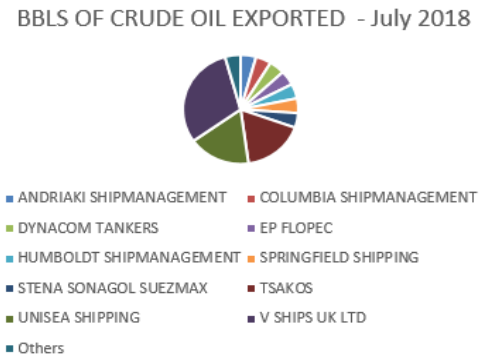


Figure 18 Bbls of Crude Oil Carried per Owner. Jul, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 17 International Traffic - Exports. Aug, 2018

AUGUST 2018				
#	VESSEL	SHIPPING AGENCY	BLSS	OWNER / DISP. OWNER
1	SEA FALCON	EP FLOEPC	324.000,00	PANTHEON TANKERS
2	AQUALEADER	EP FLOEPC	684.606,79	UNISEA SHIPPING
3	OLYMPIC TRUST	EP FLOEPC	1.030.812,79	SPRINGFIELD SHIPPING
4	PICHINCHA	EP FLOEPC	667.333,30	EP FLOPEC
5	SOCRATES	EP FLOEPC	324.951,87	TSAKOS
6	CABO DE HORNOS	EP FLOEPC	389.904,40	HUMBOLDT SHIPMANAGEMENT
7	SEAWAYS HELLAS	EP FLOEPC	360.437,35	V SHIPS UK LTD
8	SEAWAYS LUZON	EP FLOEPC	324.861,52	V SHIPS UK LTD
9	SEA GARNET	EP FLOEPC	1.013.527,53	PANTHEON TANKERS
10	ANDES (C)	EP FLOEPC	342.781,52	TSAKOS
11	EUROVISION	EP FLOEPC	759.533,85	TSAKOS
12	GENER8 SPARTIATE	EP FLOEPC	982.213,93	SELANDIA SHIPMAMAGEMENT
13	AQUAPUELCHE	EP FLOEPC	666.794,76	UNISEA SHIPPING
14	SEA FALCON	EP FLOEPC	342.000,00	PANTHEON TANKERS
15	WORLD HARMONY	EP FLOEPC	342.501,89	TSAKOS
16	AZTEC	EP FLOEPC	342.589,70	EP FLOPEC
17	BRAZOS	EP FLOEPC	960.456,75	DIAMOND ANGLO SHIPMANAGEMENT
18	SEAWAYS RUBYMAR	EP FLOEPC	359.766,60	V SHIPS UK LTD
19	AQUALEGACY	EP FLOEPC	719.391,62	UNISEA SHIPPING
20	SEAWAYS HELLAS	EP FLOEPC	359.017,23	V SHIPS UK LTD

Table 18 Market Share, Balao. Aug, 2018

Ship-owners / Operators	# Vessels
DIAMOND ANGLO SHIPMANAGEMENT	1
EP FLOPEC	2
HUMBOLDT SHIPMANAGEMENT	1
PANTHEON TANKERS	3
SELANDIA SHIPMAMAGEMENT	1
SPRINGFIELD SHIPPING	1
TSAKOS	4
UNISEA SHIPPING	3
V SHIPS UK LTD	4
TOTAL VESSELS	20

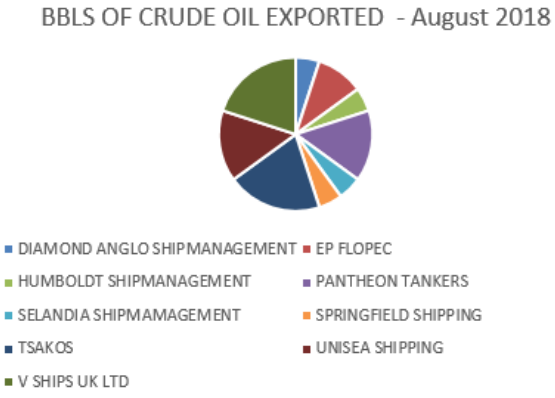


Figure 19 Bbls of Crude Oil Carried per Owner. Aug, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 19 International Traffic - Exports. Sept, 2018

SEPTEMBER 2018				
#	VESSEL	SHIPPING AGENCY	BBLS	OWNER / DISP. OWNER
1	NORDIC SPACE	EP FLOPEC	973.917,67	COLUMBIA SHIPMANAGEMENT
2	SEAWAYS JADEMAR	EP FLOPEC	358.617,68	UNISEA SHIPPING
3	SEAWAYS SILVERMAR	EP FLOPEC	337.495,21	UNISEA SHIPPING
4	CABO FROWARD	EP FLOPEC	342.516,68	V SHIPS UK LTD
5	PICHINCHA	EP FLOPEC	684.600,25	EP FLOPEC
6	AQUAPUELCHE	EP FLOPEC	520.572,29	UNISEA SHIPPING
7	DELPHI	EP FLOPEC	39.415,87	TSAKOS
8	SEAWAYS VISAYAS	EP FLOPEC	398.108,86	V SHIPS UK LTD
9	SEAWAYS SAMAR	EP FLOPEC	430.918,80	V SHIPS UK LTD
10	AQUALIBERTY	EP FLOPEC	666.817,34	UNISEA SHIPPING
11	GULF GLORY	EP FLOPEC	996.895,05	COLUMBIA SHIPMANAGEMENT
12	AQUALEGEND	EP FLOPEC	699.444,94	UNISEA SHIPPING
13	SEAWAYS HELLAS	EP FLOPEC	342.735,25	V SHIPS UK LTD
14	SOCRATES	EP FLOPEC	359.874,46	TSAKOS
15	INCA	EP FLOPEC	342.709,51	TSAKOS
16	WORLD HARMONY	EP FLOPEC	435.234,84	TSAKOS
17	PICHINCHA	EP FLOPEC	684.082,06	EP FLOPEC
18	AQUALOYALTY	EP FLOPEC	645.000,00	UNISEA SHIPPING
19	SEA FALCON	EP FLOPEC	715.506,65	PANTHEON TANKERS
20	FILIKON	EP FLOPEC	892.722,69	EURONAV NV
21	CABO KAMUI	EP FLOPEC	402.464,99	V SHIPS UK LTD
22	AQUAPUELCHE	EP FLOPEC	684.682,42	UNISEA SHIPPING
23	DANUBIA	EP FLOPEC	324.841,14	ARHENKIEL SHIPMANAGEMENT

Table 20 Market Share, Balao. Sept, 2018

Ship-owners / Operators	# Vessels
ARHENKIEL SHIPMANAGEMENT	1
COLUMBIA SHIPMANAGEMENT	2
EP FLOPEC	2
EURONAV NV	1
PANTHEON TANKERS	1
TSAKOS	4
UNISEA SHIPPING	7
V SHIPS UK LTD	5
TOTAL VESSELS	23

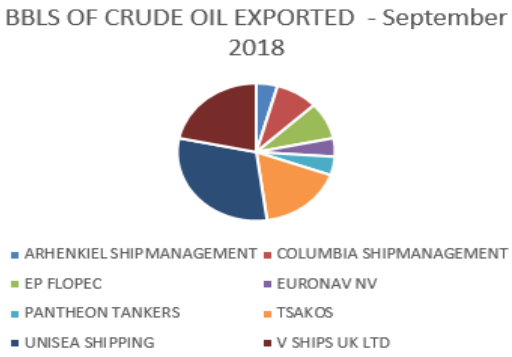


Figure 20 Bbls of Crude Oil Carried per Owner. Sept, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 21 International Traffic - Exports. Oct, 2018

OCTOBER 2018				
#	VESSEL	SHIPPING AGENCY	BBLS	OWNER / DISP. OWNER
1	GOLDWAY	EP FLOPEC	762.768,88	EASTERN PACIFIC SHIPPING
2	MAYA	EP FLOPEC	374.463,91	TSAKOS
3	SEAWAYS ROSEMAR	EP FLOPEC	324.703,25	V SHIPS UK LTD
4	PICHINCHA	EP FLOPEC	661.644,08	EP FLOPEC
5	SEAWAYS RUBYMAR	EP FLOPEC	359.630,31	V SHIPS UK LTD
6	SEA FALCON	EP FLOPEC	360.000,00	PANTHEON TANKERS
7	DANUBIA	EP FLOPEC	359.868,75	ARHENKIEL SHIPMANAGEMENT
8	AQUALEGEND	EP FLOPEC	684.054,95	UNISEA SHIPPING
9	AZTEC	EP FLOPEC	359.791,38	EP FLOPEC
10	MAYA	EP FLOPEC	344.776,96	TSAKOS
11	PICHINCHA	EP FLOPEC	648.775,91	EP FLOPEC
12	CAP PIERRE	EP FLOPEC	983.174,72	EURONAV NV
13	SOCRATES	EP FLOPEC	342.704,35	TSAKOS
14	PERSEPOLIS	EP FLOPEC	342.577,55	ANDRIAKI SHIPMANAGEMENT
15	INCA	EP FLOPEC	342.526,33	TSAKOS
16	SEAWAYS SILVERMAR	EP FLOPEC	343.007,08	V SHIPS UK LTD
17	SEAWAYS SAMAR	EP FLOPEC	450.316,75	V SHIPS UK LTD
18	SEAWAYS VISAYAS	EP FLOPEC	359.824,04	V SHIPS UK LTD
19	AQUALOYALTY	EP FLOPEC	710.951,54	UNISEA SHIPPING
20	CABO DE HORNOS	EP FLOPEC	336.715,11	HUMBOLDT SHIPMANAGEMENT
21	AQUAPUELCHE	EP FLOPEC	684.679,61	UNISEA SHIPPING
22	PICHINCHA	EP FLOPEC	684.544,66	EP FLOPEC

Table 22 Market Share, Balao. Oct, 2018

Ship-owners / Operators	# Vessels
ARHENKIEL SHIPMANAGEMENT	1
ANDRIAKI SHIPMANAGEMENT	1
EASTERN PACIFIC SHIPPING	1
EP FLOPEC	4
EURONAV NV	1
HUMBOLDT SHIPMANAGEMENT	1
PANTHEON TANKERS	1
TSAKOS	4
UNISEA SHIPPING	3
V SHIPS UK LTD	5
TOTAL VESSELS	22

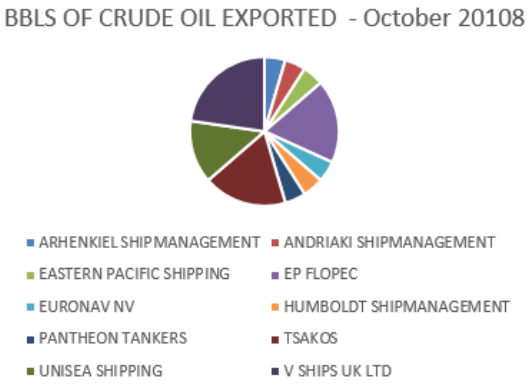


Figure 21 Bbls of Crude Oil Carried per Owner. Oct, 2018

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 23 International Traffic - Exports. Nov, 2018

NOVEMBER 2018				
#	VESSEL	SHIPPING AGENCY	BBLS	OWNER / DISP. OWNER
1	SEAWAYS VISAYAS	EP FLOPEC	359.538,97	V SHIPS UK LTD
2	GULF GLORY	EP FLOPEC	1.368.551,83	COLUMBIA SHIPMANAGEMENT
3	SELECAO	EP FLOPEC	345.620,80	TSAKOS
4	AQUALIBERTY	EP FLOPEC	684.700,45	UNISEA SHIPPING
5	SEAWAYS SAMAR	EP FLOPEC	178.679,07	V SHIPS UK LTD
6	MARFA	EP FLOPEC	992.261,35	TMS TANKERS
7	AQUALEGEND	EP FLOPEC	684.684,51	UNISEA SHIPPING
8	CABO MISAKI	EP FLOPEC	483.367,95	V SHIPS UK LTD
9	AQUASURAZO	EP FLOPEC	684.883,00	UNISEA SHIPPING
10	CABO FROWARD	EP FLOPEC	342.711,71	V SHIPS UK LTD
11	AZTEC	EP FLOPEC	342.541,16	EP FLOPEC
12	AQUALOYALTY	EP FLOPEC	648.670,58	UNISEA SHIPPING
13	INCA	EP FLOPEC	342.867,35	TSAKOS
14	SEAWAYS RUBYMAR	EP FLOPEC	342.538,43	V SHIPS UK LTD
15	SEA FALCON	EP FLOPEC	549.718,70	PANTHEON TANKERS
16	NICOPOLIS	EP FLOPEC	342.784,17	ANDRIAKI SHIPMANAGEMENT
17	DIAMONDWAY	EP FLOPEC	900.474,13	EASTERN PACIFIC SHIPPING
18	SEAWAYS GOLDMAR	EP FLOPEC	342.361,44	V SHIPS UK LTD
19	AQUALEADER	EP FLOPEC	706.841,11	UNISEA SHIPPING
20	PERSEPOLIS	EP FLOPEC	330.841,88	ANDRIAKI SHIPMANAGEMENT

Table 24 Market Share, Balao. Nov, 2018

Ship-owners / Operators	# Vessels
ANDRIAKI SHIPMANAGEMENT	2
COLUMBIA SHIPMANAGEMENT	1
EASTERN PACIFIC SHIPPING	1
EP FLOPEC	1
PANTHEON TANKERS	1
TMS TANKERS	1
TSAKOS	2
UNISEA SHIPPING	5
V SHIPS UK LTD	6
TOTAL VESSELS	20

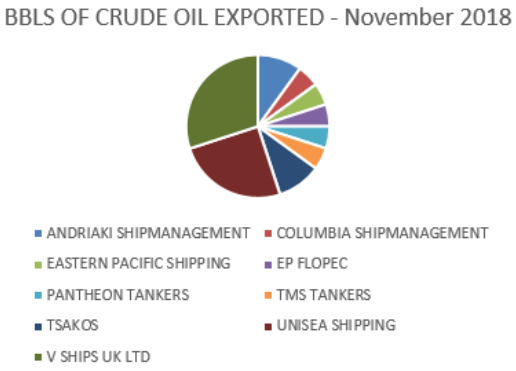


Figure 22 Bbls of Crude Oil Carried per Owner. Nov, 2018

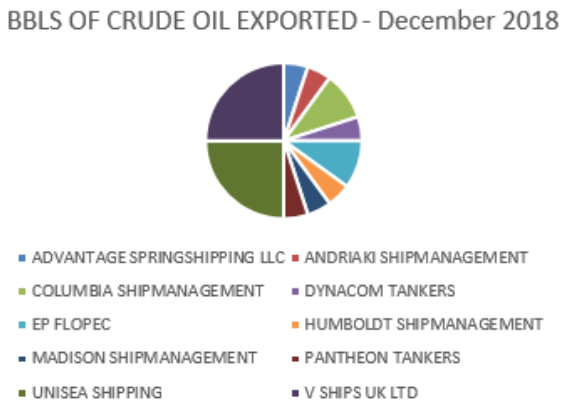
Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 25 International Traffic - Exports Dec, 2018

DECEMBER 2018				
#	VESSEL	SHIPPING AGENCY	BLSS	OWNER / DISP. OWNER
1	AQUALIBERTY	EP FLOPEC	730.531,90	UNISEA SHIPPING
2	AZTEC	EP FLOPEC	359.763,49	EP FLOPEC
3	ANTIPOLIS	EP FLOPEC	342.930,98	ANDRIAKI SHIPMANAGEMENT
4	PICHINCHA	EP FLOPEC	666.875,11	EP FLOPEC
5	CABO MISAKI	EP FLOPEC	294.748,54	V SHIPS UK LTD
6	NORDBAY	EP FLOPEC	685.709,28	COLUMBIA SHIPMANAGEMENT
7	AQUASURAZO	EP FLOPEC	684.542,19	UNISEA SHIPPING
8	AQUALEGACY	EP FLOPEC	685.047,40	UNISEA SHIPPING
9	CABO DE HORNOS	EP FLOPEC	370.022,54	HUMBOLDT SHIPMANAGEMENT
10	SEAWAYS RUBYMAR	EP FLOPEC	359.555,23	V SHIPS UK LTD
11	SEAWAYS SILVERMAR	EP FLOPEC	426.657,24	V SHIPS UK LTD
12	SEA FALCON	EP FLOPEC	684.313,65	PANTHEON TANKERS
13	AQUATRAVESIA	EP FLOPEC	684.339,92	UNISEA SHIPPING
14	SEAWAYS GOLDMAR	EP FLOPEC	342.842,83	V SHIPS UK LTD
15	MADISON	EP FLOPEC	342.262,17	MADISON SHIPMANAGEMENT
16	ADVANTAGE START	EP FLOPEC	961.065,82	ADVANTAGE SPRINGSHIPPING LLC
17	SEAWAYS JADEMAR	EP FLOPEC	324.516,04	V SHIPS UK LTD
18	COMMANDER	EP FLOPEC	342.461,60	DYNACOM TANKERS
19	AQUALEADER	EP FLOPEC	710.246,11	UNISEA SHIPPING
20	GULF GLORY	EP FLOPEC	1.368.098,88	COLUMBIA SHIPMANAGEMENT

Ship-owners / Operators	# Vessels
ADVANTAGE SPRINGSHIPPING LLC	1
ANDRIAKI SHIPMANAGEMENT	1
COLUMBIA SHIPMANAGEMENT	2
DYNACOM TANKERS	1
EP FLOPEC	2
HUMBOLDT SHIPMANAGEMENT	1
MADISON SHIPMANAGEMENT	1
PANTHEON TANKERS	1
UNISEA SHIPPING	5
V SHIPS UK LTD	5
TOTAL VESSELS	20



Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

CHAPTER 4

4. FINDINGS

This chapter shows the results obtained from the data analysis of the case study about the loading operations of crude oil at Balao's Oil Terminal, in accordance with the objectives of the research. It similarly explains the findings of the application of concepts from the literature review and establishes a manual of procedures for EP Flopec's Shipping Agency.

To demonstrate the importance of the role of the shipping agent of EP Flopec in the logistics chain of Crude Oil Tankers calling to Balao, and how a negligent service could affect the national economy of Ecuador, this study has calculated the number of barrels of crude oil exported from Balao in 2018. Secondly, the total amount of crude oil has been divided among ship-owning companies to determine how many barrels were carried by ships owned by EP Flopec, and the quantity of barrels carried by ships from commercial partners operated by EP Flopec.

Finally, this chapter shows the number of ships appointed to the shipping agency of EP Flopec and the percentage of crude oil handled by the shipping agency, from the total of exports through Balao Oil Terminal.

4.1. Manual of Procedures for the Shipping Agency of Flopec

4.1.2 Agency Appointment

Firstly, the operations of the agency start when a ship-owner, operator, or charterer, depending on the charter party agreement, makes an appointment. Appointments are made through different accountable software such as DA-DESK and Diabos among others, where the agent submits the port or cargo costs, as well as husbandry matters costs and the counterparty approves. One important condition of the shipping agency to assist a tanker in Balao is to receive 90% of the total proforma submitted to the principals. Otherwise, the agency cannot serve the ship, causing delays and losses for owners or cargo charterers.

The port costs and cargo costs are published by the Port Authority every year. The shipping agency sticks to those costs and adds an Agency Fee for the services provided. Furthermore, the port costs will change according to the size of the ship and the quantity to be loaded. Bigger ships will berth in the OCP Terminal to load Napo crude oil and will require more tugs for the berthing maneuver. Additionally, one permanent tug to the order of the Terminal will be required during the loading operation for safety reasons. In contrast, smaller ships berthing at SOTE or TME buoys will require fewer and smaller tugs for the maneuver. Moreover, the loading time will vary in accordance with the capacity of the ships

Table 26 Tariffs for International Traffic at Balao

TARIFFS / INTERNATIONAL TRAFFIC			
DESCRIPTION	**AMOUNT / $**	**UNIT**	**OSERVATIONS**
Recepetion and Despatch	0,036	x GRT	Minimum tariff $359,63
Use of Infraestructure / Buoys	0,119	x GRT x Day	
Safety Inspection	0,0048	x GRT x Maneuver	Minimum tariff $139,21
Pollution Fee	0,0116	x GRT x Day / Fraction	
Anchorage Fee	5,095	x LOA x Day	
ISPS Fee	116,01	x Day / Fraction	
Pilotage			
Tariff per Maneuver per Tug up to 1500HP	0,06	x GRT	
Tariff per Maneuver per Tug 1501 to 3000 HP	0,096	x GRT	
Tariff per Maneuver per Tug 3001 to 4500 HP	0,119	x GRT	
Tariff per Maneuver per Tug of 4501 HP or bigger	0,139	x GRT	
Tug to the order of the Terminal 1500 HP	406,04	x Hour	
Tug to the order of the Terminal 1501 HP to 3000 HP	464,04	x Hour	
Tug to the order of the Terminal 3001 HP to 4500 HP	580,06	x Hour	
Tug to the order of the Terminal 4501 HP or bigger	696,07	x Hour	

TARIFFS / INTERNATIONAL TRAFFIC			
DESCRIPTION	**AMOUNT / $**	**UNIT**	**OSERVATIONS**
Boat Service	233,75	x Hour	
Immigration Fee	30		
Customs Charges	610		
Pilotage			
General Tariff per Maneuver	0,06	x GRT	
Cargo Costs (Loading)	0,00107	x Barrels	
Agency Fee	1,800		
Communication Fee			

Source: Adapted from Superintendence of Balao, 2018

Elaborated by Sebastian Vasquez, 2019

4.1.3 Pre-arrival Information

Once the appointment has been confirmed, and the funds received, the radio station of the company makes immediate contact with the Master of the ship by e-mail, to provide the Master with all the generalities and requirements of the terminal destined for berthing. Simultaneously, a position report format and some certificates are requested by the maritime authority in advance.

The Master of the ship has to reply with the pre-arrival information to provide the agency with relevant information of the ship and the best estimated time of arrival (ETA), to check that the tanker complies with the requirements and restrictions of the terminal and to be prepared for the ship's arrival. The main document required by the agency prior to the arrival of the ship is the IAA (Indian Alfa Alfa) which contains all the details of the ship, such as the port of registry, owners, IMO number, dwt, class, and gross registered tonnage, among others.

Furthermore, the boarding agent has to send by e-mail a list of documents that the Master needs to present to local authorities upon arrival.

4.1.4 Reports to the Terminal

Once the Master has confirmed his ETA and provided certificates to confirm that everything is in good order to berth at arrival, the radio station of the agency has to notify the arrival of the vessel to port authorities with 24 hours in advance. Moreover, the agent starts its role by paying the lighthouses and buoys fees to the coast guard, as a pre-requirement for the ship to arrive.

4.1.5 Arrival

At Balao Terminal, it the attendance of a pollution officer, customs representative, health authority and boarding agent is compulsory upon arrival of the vessel. Most of the ships have a tide schedule and want to be granted the authorization to do any operations upon arrival. However, according to the policies and regulations of the terminal, ships can only operate once the authorities grant the free pratique onboard. In other words, the ship cannot under any circumstances perform activities without being received by authorities and agencies. Therefore, this is one of the main tasks of the agent as most of the ships arriving at the port are expecting to berth immediately, to receive services from shore or to perform jobs onboard the vessel.

This situation puts a lot of pressure on the agent, who has to act quickly and efficiently when a tanker arrives to avoid delays. However, the delays upon arrival do not always depend on the agent.

Unfortunately, there is only one pollution officer and one customs officer available during a shift at the terminal, which means that if any other ship arrives before or sails, the new arriving tanker has to wait until the availability of the authorities. The same situation could happen if the pollution officer is in the middle of a port state control or supervising other operations.

A good agent has to plan arrivals with time in advance, to coordinate with authorities and advise them if any ship has priority or if it needs to berth upon arrival. This operation involves good communication and relationship between the agency, principals of the ship, and authorities.

The master has to send the position reports to the coastguard and advise the terminal through radio system or e-mail that the ship is approaching the anchorage area. Additionally, the Master needs to notice when the ship is 10 miles away from shore to arrange the pilot, who will board the vessel 5 miles from shore and will take it into the anchorage area to wait for authorities and agents for reception formalities.

Thereafter, once onboard the ship, the pollution officer who represents the port authority together with the customs representative and health authority verify that all the documents and certificates are valid and in good order. At the same time, the agent has an important role in recording the times and facts of the voyage, including the time that notice of readiness is tendered. This document filled out by the agent is called “Travel Memorandum,” the same that is reported to all parties as a record of the arrival and commencement of the laytime, if it is the case.

Additionally, the Travel Memorandum contains important information and times for owner and charterers to claim demurrages, dispatches, off hires, bunkers and among others:

- Voyage Number
- End of Sea Passage
- Pilot on Board
- Dropped Anchor
- Pilot Disembarks
- Authorities on Board
- Tender of Notice of Readiness
- Bunkers / Figures on arrival
- Drafts on arrival
- Free Pratique Granted

Hence, if everything is in good order, the authorities and the agent will set the time of the free pratique, which authorizes the ship to operate in the terminal.

4.1.6 Additional services

During the time the ship remains at the anchorage area waiting for berthing, it can receive services from the agency. The most common services requested by the Master during the port call in Balao Oil terminal are the delivery of provisions, spares, charts, cash to master, and garbage disposal. Moreover, owners or charterers often request to arrange bunkers, surveyors or service boats for joining crew and repatriation. Therefore, the agent has to coordinate these services to avoid interference with the loading activities and to take advantage of the time the vessel waits to berth. It is important to mention that according to the rules and policies of the terminal, any work or services onboard cannot be performed while the ship is loading or moored to the buoys.

4.1.7 Mooring Operation

The shipping agency has the responsibility of ordering the mooring operation of a ship. Given that in Balao´s Terminal vessels berth to floating buoys or sub-terminals, the request has to be made at least 4 hours in advance to prepare the gang or personnel from the sub-terminal to assist the operation. For this procedure, the pilot comes onboard the ship and takes it next to the buoys, and once the tanker is all fast, the stevedores' gang moor it to the buoys and to the tug, which remains to the order of the terminal during loading of crude oil. Moreover, the Port Authority checks the mooring ropes previous to the berthing operation, to avoid any incident while the ship is loading.

4.1.8 Loading Operation

Furthermore, after the ship is safely moored to the buoys, the stevedores and personnel from the sub-terminal proceed to connect hoses to the ship´s manifold. The next stage of the operation is when the oil terminal starts pumping the crude oil into the ship, at a loading rate of 30,000 barrels per hour on average. If the ship is capable of handling that average rata, the loading time for ships could be estimated as follows:

- PANAMAX: These ships can load around 360,000 barrels of crude oil. A usual loading operation of a Panamax would take 12 hours, counting from the connection of hoses.
- AFRAMAX: The loading capacity of these vessels is around 720,000 barrels, twice that of a Panamax. With the average loading rate of the terminal, these ships could take around 24 hours to load crude oil.
- SUEZMAX: These are larger ships with the capacity to load slightly more than 1,000.000 barrels of crude oil. At the average loading rate, it would take around 35 hours for completion of cargo loading.

Is important to clarify that the above times are for reference only and assuming smooth operation from shore side and the ship´s capability. Moreover, for safety purposes, a loading master from the terminal stays during the loading process to supervise that the loading rate is appropriate, and if by any circumstance the loading has to decrease or is possible to increase, they would report to the terminal and the agency.

4.1.9 Unmooring

For this operation, the Master of the ship and the loading master communicate to the terminal within two hours in advance of the estimated time of completion. Therefore, the pilot would prepare to take the ship into the anchorage area once the hoses have been disconnected. Once the ship is anchored, the terminal checks quantities pumped to the ship and prepares the bills of lading.

During this period of time, while the master awaits for B/L and port clearance, some of the tankers, and especially those sailing to the United States of America as the next port, request divers inspection to be sure that the ship has not been contaminated with drugs during its stay at the port

4.1.10 Bill of Lading

The oil terminals (TEPRE, SOTE, and OCP) issue the bills of lading from their offices at the shore. After completion of loading, the loading master and the captain of the ship measure the quantities loaded. This consists of a comparison between the quantities in metric tons pumped from the oil terminal, and the quantity of crude oil in the tanks of the ship. In case there are no discrepancies, the captain of the ship accepts the draft bill of lading issued from the terminal, which is sent via e-mail by the agent. After that, the shipping agent picks up the B/ls from the offices of the corresponding terminal to take them on board for the master´s signature.

4.1.11 Port Clearance

After completion of loading, every ship wants to depart as soon as possible to reach its next port or next fixture on time. This is an important procedure where the shipping agent has to act with agility to arrange the port clearance immediately. This operation involves the attendance of the pollution officer and customs representative together with the boarding agent onboard the vessel to verify loading documents and provide the ship with port clearance.

4.1.11.1 Documents required in the Port Clearance:

- **Bill of Lading**

The boarding agent provides a set of copies to the pollution officer, and one set of Bills of lading to the consignee or Master. On the other hand, the first original, second original and third original are taken back with the agent and delivered to the terminal. Although some sets of copies are distributed on board, the Master must sign and stamp all the bills of lading onboard, including the set of copies for the pollution officer.

In some cases, when there are discrepancies regarding the quantities loaded and issued on the Bill of Lading, the master will issue a letter of protest to the terminal, which is signed by the boarding agent with the remark of “as agent only.”

- **Cargo Manifest**

The agent has to elaborate a cargo manifest from the quantities and details contained in the bill of lading for their records, for authorities and for the Master of the ship. Furthermore, all the copies of the cargo manifest have to be signed and stamped by the Master.

- **General Declaration**

The general declaration is completed by the agent, and it contains details of the ship and voyage. Among the information inserted by the agent, the main purpose of this document is to reflect the figures of the vessel at departure, the time that the oil tanker was cleared from the terminal and the estimated time of sailing.

- **Statement of Facts**

At the port clearance, the agent elaborates a statement of facts of the ship during a port call in Balao. This Statement of facts has to be signed by the captain of the ship and by the loading master. On the other hand, the captain gives the agent the ship´s statement of facts to be signed and stamped by the agent. This statement of facts includes the port clearance time and the bunkers on sailing.

- **Crew List / Passenger List / Store List**

Provided by the master to the agent, the customs authority revises these documents, together with the crew's passports.

4.1.12 Customs System Report

After the ship has sailed, one important task of the agent is to submit through the online Customs system (ECUAPASS) the information about the crude oil exported, in terms of barrels and value that the export represents. Additionally, it contains details of the carrier, charterers, and charter party date. The customs allows the agency to submit this information up to 48 hours after the departure of the vessel. Otherwise, the agency is fined USD 2,000.

4.1.13 Submission of Final Disbursement Account

To conclude and close the voyage of the ship, the agent submits to owners and charterers the Final disbursement accounts, which usually varies from the initial proforma sent prior arrival as many additional and unexpected services are provided to the ship during its port call to Balao.

4.2. Barrels of crude oil exported through the Oil Terminal of Balao 2018

Table 27 shows the total sum of barrels of crude oil exported every month through the Oil Terminal of Balao in 2018. A total of 134,404,194.21 barrels of crude oil were exported from Balao.

Table 27 Total Exports -Balao Oil Terminal

CRUDE OIL EXPORTS 2018	
MONTH	**BBLS**
January	11,683,817.26
February	9,061,018.73
March	11,943,592.50
April	9,933,783.80
May	11,664,829.48
June	11,614,317.65
July	11,763,507.11
August	11,297,483.40
September	12,279,174.65
October	10,821,500.12
November	10,974,638.59
December	11,366,530.92
TOTAL	**134,404,194.21**

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

4.3. Barrels of Crude Oil Exported from Balao by Owners or Disponent Owners Companies

Table 28 Findings: Crude Oil Exports 2018 - Structure

#	SHIPPING AGENCY	BARRELS	OWNER / DISP. OWNER
1	EP FLOPEC	790.425,90	ADVANTAGE SPRINGSHIPPING LLC
2	EP FLOPEC	961.065,82	ADVANTAGE START SHIPPING LLC
3	EP FLOPEC	11.248.755,54	TSAKOS
4	EP FLOPEC	2.462.728,33	ANDRIAKI SHIPMANAGEMENT
5	EP FLOPEC	665.446,09	ANGLO EASTERN MANAGEMENT
6	EP FLOPEC	1.386.687,33	ARHENKIEL SHIPMANAGEMENT
7	EP FLOPEC	1.026.663,24	BERNARD SCHULTE SHIPMANAGEMENT
8	EP FLOPEC	9.357.091,00	COLUMBIA SHIPMANAGEMENT
9	EP FLOPEC	3.707.572,36	DYNACOM TANKERS
10	EP FLOPEC	1.663.243,01	EASTERN PACIFIC SHIPPING
11	EP FLOPEC	12.967.666,52	EP FLOPEC
12	EP FLOPEC	2.832.514,66	EURONAV NV
13	EP FLOPEC	685.768,44	GULF ENERGY MARITIME
14	EP FLOPEC	3.272.087,83	HUMBOLDT SHIPMANAGEMENT
15	EP FLOPEC	342.262,17	MADISON SHIPMANAGEMENT
16	EP FLOPEC	873.543,04	NAT CHARTERING
17	EP FLOPEC	1.909.346,14	OMAN SHIPMANAGEMENT
18	EP FLOPEC	3.989.066,53	PANTHEON TANKERS
19	EP FLOPEC	1.369.119,52	SEA WORLD MANAGEMENT
20	EP FLOPEC	3.024.905,36	SELANDIA SHIPMAMAGEMENT
21	EP FLOPEC	3.426.138,15	SPRINGFIELD SHIPPING
22	EP FLOPEC	4.584.724,43	STENA SONAGOL SUEZMAX
23	EP FLOPEC	1.986.833,88	TMS TANKERS
24	EP FLOPEC	27.398.107,20	UNISEA SHIPPING
25	EP FLOPEC	24.349.422,13	V SHIPS UK LTD
26	EP FLOPEC	791.578,76	V8 POOL INC SUEZMAX POOL
27	EP FLOPEC	7.331.430,83	OTHERS

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 28 reflects the number of barrels of crude oil transported from Balao by each ship-owner or disponent owner during 2018. Additionally, it shows that EP FLOPEC has commercial agreements with around 27 partners, from whom vessels were chartered to be operated to transport Ecuador's crude oil. It is important to clarify that all these companies are commercial partners of EP Flopec, which is the operator of all the ships carrying crude oil from Ecuador.

In addition, from Table 28, it was possible to identify the biggest partners of EP Flopec during 2018 in terms of barrels exported. Figure 23 shows the five partners that carried most of the crude oil exported from Balao in 2018.

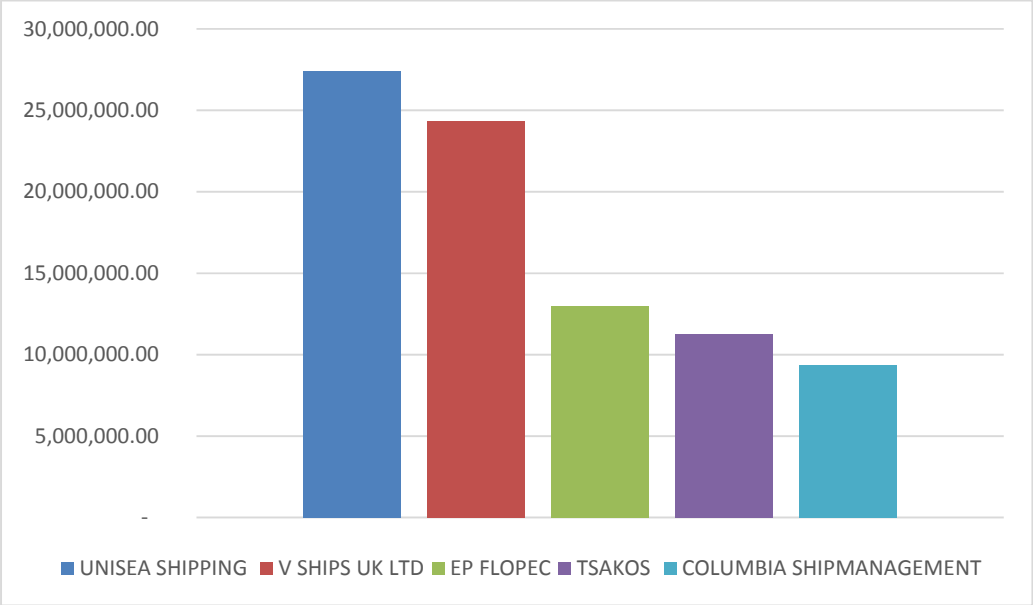


Figure 23 Top Partners of EP FLOPEC 2018
Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

The vessels owned or managed by Unisea Shipping, mostly Aframaxes, carried the largest amount of crude oil from Balao Oil Terminal with around 27.398.107,20 barrels. Insecond place was Panamax ships managed by V Ships with 24.349.422,13 barrels transported, followed by a combination of Aframax and Panamax ships owned by EP Flopec and Tsakos with 12.967.666,52 and 11.248.755,54 barrels, respectively. The fifth largest commercial partner was Columbia Shipmanagement, with a fleet of Suezmaxes and VLLCs transporting 9.357.091 barrels of Ecuador´s crude oil.

Further, the data analysis identified which specific ships carried the most significant quantity of barrels of crude oil in 2018. Figure 24 highlights five ships from a total of 247 ships that called to Balao in 2018, which transported the largest quantities of barrels of crude oil.

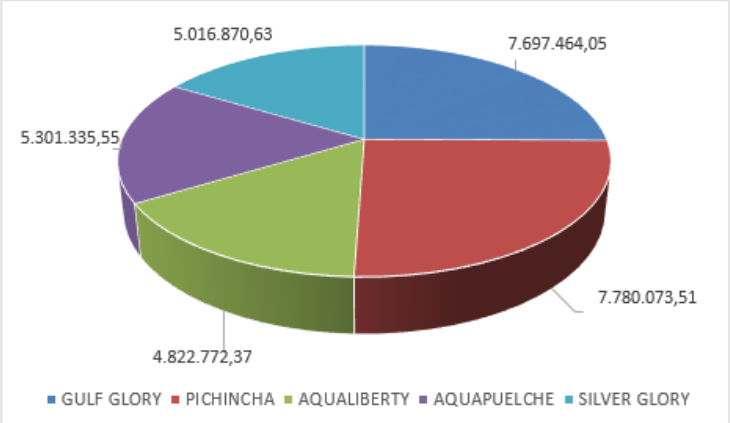


Figure 24 Top 5 Port Calls in 2018, by Ships

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 29 Port Calls in 2018, by Ship, Owner, and Agency

# PORT CALLS	VESSEL	SHIPPING AGENCY	BARRELS	OWNER / DISP. OWNER
12	PICHINCHA	EP FLOPEC	7.780.073,51	EP FLOPEC
6	GULF GLORY	EP FLOPEC	7.697.464,05	COLUMBIA SHIPMANAGEMENT
8	AQUAPUELCHE	EP FLOPEC	5.301.335,55	UNISEA SHIPPING
4	SILVER GLORY	EP FLOPEC	5.016.870,63	OTHERS
7	AQUALIBERTY	EP FLOPEC	4.822.772,37	UNISEA SHIPPING

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

The five ships that carried the largest quantities crude oil were identified with their operators, and the shipping agency appointed in all port calls. Additionally, it reflects the number of port calls to Balao during the year. The motor tanker Pichincha owned by EP Flopec was the ship that most times called to Balao and the one which transported the largest amount of crude oil in 2018 with around 7,780,073 million barrels.

4.4. Barrels of crude oil exported by vessels owned by FLOPEC and by Partners.

The quantitative data obtained from the records of Balao Oil Terminal was used to determine the how many barrels were transported by the ships owned by EP FLOPEC, and how many barrels were carried by ships from commercial partnerships and pools.

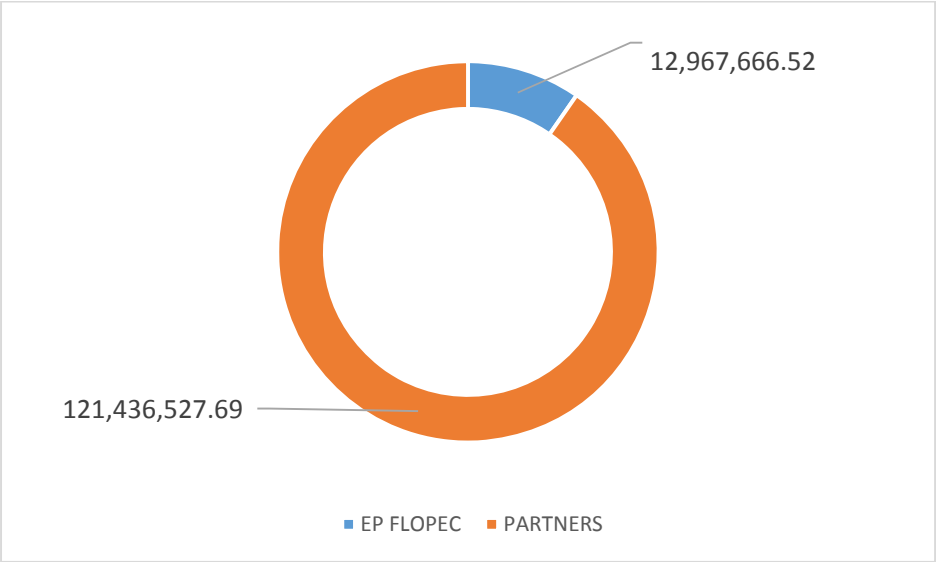


Figure 25 Bbls of Crude Oil Exported by EP Flopec owned ships

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

Table 30Bbls of Crude Oil Exported by EP Flopec owned ships, Percentage.

OWNER / DISP OWNER	BARRELS OF CRUDE OIL	PERCENTAGE
EP FLOPEC	12.967.666,52	9,65%
PARTNERS	121.436.527,69	90,35%
TOTAL	**134.404.194,21**	**100,00%**

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

The vessels owned by EP Flopec carried about 9.65% of the total barrels of crude oil exported from Balao Oil Terminal, and ships from commercial partnerships and pools transported the remaining 90.35%.

4.5. Number of crude oil tankers calling to Balao Oil Terminal in 2018

According to the Oil terminal of Balao, 247 vessels called to the port in 2018 for loading operations of crude oil.

Table 31 Total Ships Calling to Balao, 2018

BALAO OIL TERMINAL 2018	
Total Ships	247
Percentage	100%

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

4.6. Number of crude oil tankers appointed to Flopec Shipping Agency in 2018

From 247 crude oil tankers registered in Balao Oil Terminal for export operations of crude oil, 246 tankers were appointed to the shipping agency of EP Flopec to attend to them upon arrival and during their operations. In other words, 99.6% of the total ships calling to Balao for crude oil loading operations were appointed EP Flopec's shipping agency.

Table 32 EP Flopec Shipping Agency Market Share 2018

	SHIPPING AGENCY			
	EP FLOPEC	REMAR S.A	OTHERS	TOTAL
Number of Ships	246	1	0	247
Percentage	99.60%	0.40%	0%	100%

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

4.7. Crude Oil exports from Balao Oil Terminal, fleet structure.

Furthermore, after analyzing the ships performing loading operations of crude oil in Balao in 2018, it was possible to identify the fleet structure and the Companies whose ships had a higher number of port calls to Balao. Thus, in the first position is VSHIPS with 64 port calls, followed by Unisea Shipping and Tsakos with 43 and 32 port calls, respectively. The ships owned by EP Flopec are placed in 4th position with 23 port calls to Balao, followed by Dynacom Tankers and Humboldt Shipmanagement.

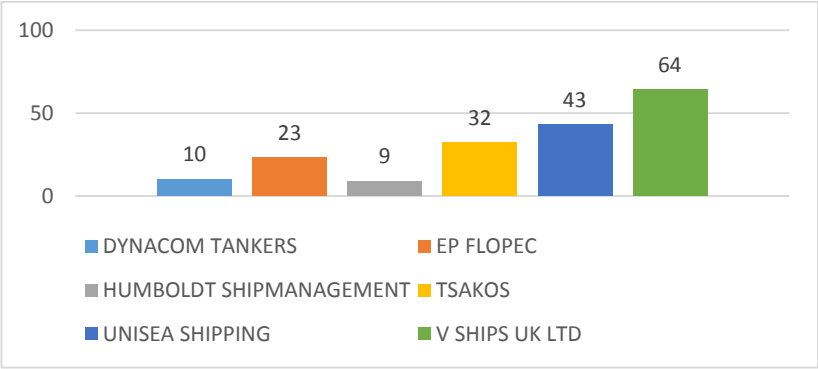


Figure 26 Crude Oil Exports - Top 5 Fleet Structure

Elaborated by Sebastian Vasquez, 2019

Source: Adapted from Superintendence of Balao, 2018

CHAPTER 5

5. DISCUSSION

5.1. Port Calls of Crude Oil Tankers at Balao's Terminal

This study raises the research question about the need to appoint a shipping agent in Balao. According to the operational regulations and rules of Balao Oil Terminal, it is mandatory for every ship to appoint a local shipping agency to arrive in Balao. The Port Authority does not only request the shipping agency for operational purposes, but accounts and invoice address. Moreover, the ship-owner or disponent owner demands the assistance of the shipping agent who will provide pre-arrival information, requirements of the Terminal and a proforma disbursement account for port costs, to plan the voyage instructions and budget properly. EP Flopec's shipping agency asks for 90% of the total proforma to be paid prior to the ship's arrival.

Furthermore, the attendance of a shipping agent is requested by the Port Authority upon arrival of the ships to grant the free practique. The agent, together with a Port Officer, Customs Officer and Health Authority, must board the ship upon arrival to check the compliance of all requirements from the Terminal. Similarly, the Authorities have the obligation to check the validity of the certificates shown by the ship and most importantly, the condition of the mooring ropes.

The shipping agent has the responsibility to inform the Master of the ship about the documents and certificates required by the Terminal to operate. Therefore, the role of the boarding agent at inwards formalities will be to guide the Master through the control procedures to avoid delays or extension of free pratique.

Once the free pratique is granted, the agent has to provide a detailed report of timings to its principals, including the time of arrival, time of NOR tendered and accepted, as well as the time of free pratique granted. This report is known as “Arrival Report,” and is important for the parts for the calculation of possible demurrages, as it shows the NOR acceptance which means the start of laytime countdown.

Furthermore, the agent is obligated to arrange the berthing operation with the sub-terminals, in accordance with the operational regulations of Balao regarding mooring and unmooring requests. Additionally, the shipping agent has to coordinate any husbandry matters or services before mooring maneuvers, as it is not allowed to perform any activity while the ship is loading.

Similarly, the agent and the Authorities have to board the vessel after completion of cargo to grant the departure. Before boarding the ship, the agent has to pick up the Bills of Lading from the sub-Terminal’s offices and take them on board for the Master’s signature and stamp. The Master will keep a set of cargo documents, including consignee’s B/L copy to deliver the cargo in the discharge port against the original one.

Once the ship departs, the shipping agent sends a set of copies of cargo documents to his principals, including the ship’s departure request, NOR, SOF, B/L, cargo manifest, and receipts for services performed for the ship. Additionally, the agency will send the invoices for all port costs and services to the ship during its port call to Balao.

5.2. The Need for a Well-structured Manual of Procedures for EP FLOPEC Shipping Agency

Shipping agencies are not required to have a guideline or procedures manual to operate in Balao Oil Terminal. However, it is an effective practice to have a properly elaborated guideline to optimize time and resources during the port call of crude oil tankers. A well-established manual of procedures would allow the shipping agent to act in accordance with its duties and limitations in case of unforeseen circumstances. The operations of crude oil tankers involve many risks, from minor accidents, such as damage to the ship's or berth's structure, to major accidents, such as oil spills, collisions between ships or in the worst case scenario a human loss.

In the case of EP FLOPEC, the results of the data analysis showed that the shipping agency covers 99.6% percent of the entire market in Balao, which represents the appointment of 246 vessels out of 247. Therefore, covering practically the entire market requires efficient procedures and organization.

The procedures of the shipping agency of EP FLOPEC should be in accordance with terms and type of appointment, by identifying in the first place the relationship with the principal and the instructions detailed in the nomination. In addition, the agent has to inform all activities of the ship and notify the principal of any agreement or contract that the agent will sign on its behalf, for previous authorization. The findings of the market share of EP FLOPEC Shipping Agency demonstrated that 90.35% of the ships that carry the exports of crude oil belong to commercial partnerships, and only the 9.6% of crude oil is transported by ships owned by EP FLOPEC. This information allows the shipping agency to notice that most of the appointments received come from ships time chartered to EP FLOPEC. Hence the agent must keep ship information confidential and protect the interest of its principal, which in this case would be EP FLOPEC.

In addition, it is important to highlight that EP FLOPEC is the only operator of the ships exporting crude oil from Ecuador. Therefore, a negligent service from the shipping agency would directly affect the same company and the economy of the country, as Ecuador's GDP depends primarily on oil exports. On the other hand, it might be convenient to have its own shipping agency to attend the whole fleet operated by the same Company. However, conflicts can arise from delays in payments of disbursement accounts within the same Company, and conflicts of interest in disputes due to operational delays, against owner and operators.

5.3. Implications for Ship-owners, Charterers, and Shipping Agent in Demurrages under Voyage Charter Party.

As previously explained, ships that carry crude oil from Ecuador are chartered and operated by EP FLOPEC. Among the fleet operated by the company, EP FLOPEC owns five ships and 62 ships are under charter party agreements. These ships are offered to cargo owners through the intermediation of a shipbroker, who fixes the cargo according to the client's requirements. Consequently, the cargo fixture will be made under new charter party agreements between EP FLOPEC as a carrier, and the cargo charterer.

In the seaborne trade of crude oil tankers, traders usually agree on voyage charter-party contracts to carry the cargo from one specific point to another port or place of discharge. In what to concerns to the shipping agent, it is important for the agent to know in advance the implications of the negotiations made by its principals, to protect its interests and avoid the leak of confidential information.

The agent has the obligation to provide constant updates to its principal, informing about berthing prospects previous arrival of the ship, and the activities of the ship once it has arrived on a daily basis. The information provided by the agent will have a huge influence on the negotiations made by its principal, as the principal will know the

congestion of the port to agree on demurrage terms and conditions, particularly in the case of EP FLOPEC, as 90.35% of the operating fleet belongs to different ship-owners and is chartered by the Company. Moreover, as the shipping agency is part of EP FLOPEC, the principal will have trustable and fresh information before any other party.

In regards to loading operations at Balao's Terminal, the agent has to inform to the parts time of acceptance of NOR, to allow charterers and carrier to know that the laytime has started running. Further, the agent has the obligation to inform if any event happens before or during mooring maneuvers and loading operations. To provide detailed information would help the principal to determine if that event is a reason to stop counting the laytime. Moreover, this would support claims against cargo charterers.

On the other hand, it is important for the agent to identify the relationship with owners and be aware that it must serve the appointing operator. In some cases, owners appoint the agent to arrange repairs, surveys, deliveries of stores, crew changes, or any service for the ship and crew. This type of additional appointments cannot interfere with the loading activities of the ship, and the agent has to bear in mind that any requirements from the principal have priority.

5.4. Market Share of EP FLOPEC Shipping Agency in Balao Oil Terminal.

The findings on the quantitative data reflect a dominant position of EP FLOPEC Shipping Agency of market share in the Oil Terminal of Balao. However, this result is not a surprise when the only operator authorized to transport the crude oil of Ecuador is EP FLOPEC.

In 2018 only one ship was appointed to a different Company; the remaining ships calling to Balao were nominated to EP FLOPEC shipping agency. This research discusses the pros and cons of covering almost the entire market. Firstly, it is worth mentioning that EP FLOPEC has a monopoly in Balao, which can be convenient for the Company and the Country as it is a Public Entity. However, when there is only one Company providing services to ships exporting crude oil, the quality of service cannot be compared and measured. For that reason, some owners and cargo charterers appoint their own protective agents to look out for their interests.

CHAPTER 6

6. CONCLUSION

To conclude, the main insights of this case study are briefly described in summary, followed by the contributions and limitations of this research.

6.1. Summary

Crude oil is the single largest commodity transported by sea due to its natural properties and multiple uses as a source of energy. Ecuador is a producing country and exports crude oil from the offshore buoys of the Oil Terminal of Balao. Furthermore, all the crude oil exported from Ecuador has to be operated by the Public Shipping Company EP FLOPEC, which has its own shipping agency.

This research focused on determining the role and main activities of the shipping agent, especially in the case of the shipping agency of EP FLOPEC, which was considered to have a competitive advantage over other shipping agencies in Balao due to the connection with EP FLOPEC. Therefore, after analyzing quantitative data from the records of the Oil Terminal of Balao, and through an extensive literature review from books, journals, previous research, and other secondary sources, it was possible to establish a manual of procedures that describes the role of the shipping agent, applicable to the operations of Oil tankers calling to Balao Terminal. The main motivation to develop the manual of procedures for the activities of the shipping agent was the result of a deep data analysis, which reflected a dominant position, and almost a monopoly controlled by the shipping agency of EP Flopec. To be more precise, 246 ships out of 247 vessels calling to Balao were appointed to the shipping agency of Flopec in 2018.

Moreover, by analyzing trustable secondary sources, the relationship between owners, charterers, and shipping agents was determined and applied to the activities of the shipping agency of EP FLOPEC. Additionally, this research explained the liabilities of the shipping agent in accordance with those relationships, which depend on the type of appointment that the agency receives.

Similarly, this research applied the concepts and contractual conditions implied in the negotiations of charter parties, especially in the voyage charter-party where the carrier and cargo charterer could get into disputes of demurrages, caused either by operational reasons of the Terminal or by negligent service from the agent. The study explains the position of the shipping agency in these contractual agreements and the influence the agency could have on the terms agreed by its principal.

Finally, this research concludes with the accomplishment of the objectives and answering the research questions. It was possible by the application of qualitative data and the interpretation of results obtained from a deep quantitative data analysis, which allowed the researcher to determine interesting outcomes about the structure of the market at Balao Oil Terminal, which is of the concern of EP FLOPEC as a whole Company.

6.2. Contribution

This research contributes to the operations of EP FLOPEC as a Shipping Management Company. The nature of operations of EP FLOPEC, which are mostly comprised by operation of a chartered vessel, can benefit from the results of the data analysis and use the information for internal purposes such as fleet optimization, or

budget planning of ships arriving in Balao. Similarly, the procedures established in this study can contribute to the voyage instructions given by operators to the Masters of ships, especially when it is a new ship or new Master calling to Balao Oil Terminal. Additionally, the research explains the relationship between the actors, as the duties and liabilities of the parties to support claims and disputes.

Furthermore, the research contributes to the commercial partners of EP FLOPEC and to all ships calling to the Oil Terminal of Balao, to have a clear understanding of the regulations and restrictions imposed by the Terminal, in particular, the need to appoint a local shipping agency to be allowed to operate. Moreover, this study is useful for the partners of EP FLOPEC to understand the operational procedures of the Terminal, to arrange husbandry matters and other services for their ships.

Finally, this study aimed to contribute to the shipping agency of EP FLOPEC, which, according to results obtained from data analysis, handles 99.6% of the crude oil exported through the Oil Terminal of Balao. Therefore, the shipping agency could use the manual of procedures established in this research to analyze the current procedure of the shipping agent applied by the agency and check if any gaps exist that could be improved. On the other hand, the shipping agents can identify from this research their liabilities and rights when they are appointed, to know what actions to take against claims from principals

6.3. Limitations

This research was carried out with secondary data obtained from books, academic journals, reports of government organizations, and official websites. Due to time and location limitations, it was not possible to get primary information from the Companies and Entities considered in this research. However, it is suggested to approach the actors in this case study to obtain comments about areas that could be improved in further research.

6.4. Recommendations

The study recommends doing further research about the role of shipping agents, specifically in the tramp industry. Through this research, it was difficult to find information from different sources or authors, as most of the literature is about liner agencies. Similarly, this research suggests continuing with further studies in the application of the principles of maritime logistics in the tramp industry, to integrate the logistics network of the tramp market.

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